



UNIVERSITATEA
DE MEDICINĂ ȘI FARMACIE
„VICTOR BABEŞ“ DIN TIMIȘOARA

Ciprian Ilie Roșca

**MEDICAL SEMIOLOGY
QUESTIONS BANK,
1ST SEMESTER EXAM**

**General Semiology
Respirator System Semiology**

Editura „Victor Babeș”

Piața Eftimie Murgu nr. 2, cam. 316, 300041 Timișoara

Tel./ Fax 0256 495 210

e-mail: evb@umft.ro

www.umft.ro/ro/organizare-evb/

Director general: Prof. univ. dr. Sorin Ursoniu

Colecția: MANUALE

Coordonatori colecție: Prof. univ. dr. Codruța Șoica

Prof. univ. dr. Daniel Lighezan

Referent științific: Prof. univ. dr. Nicolae Balica

© 2026

Toate drepturile asupra acestei ediții sunt rezervate. Reproducerea parțială sau integral, pe orice suport, fără acordul scris al autorului este interzisă și se va sancționa conform legilor în vigoare.

ISBN 978-606-786-530-1

Authors

Melania Veronica Ardelean - lecturer, "Victor Babes" University of Medicine and Pharmacy, Timisoara, senior consulting physician in gastroenterology and internal medicine

Ruxandra Christodorescu - associate professor, "Victor Babes" University of Medicine and Pharmacy, Timisoara, senior consulting physician in internal medicine and cardiology

Nilima Rajpal Kundnani - lecturer, "Victor Babes" University of Medicine and Pharmacy, Timisoara, senior consulting physician in family medicine, consulting physician in internal medicine and pediatrics

Daniel Florin Lighezan - university professor, "Victor Babes" University of Medicine and Pharmacy, Timisoara, senior consulting physician in internal medicine and cardiology

Ariana Violeta Nicoras - assistant professor, "Vasile Goldis" West University, General Medicine Faculty, consulting physician in internal medicine

Ciprian Ilie Rosca - lecturer, "Victor Babes" University of Medicine and Pharmacy, Timisoara, senior consulting physician in internal medicine and family medicine, consulting physician in cardiology

Maria-Silvia Rosca - senior consulting physician in family medicine

Andrei Cristian Sarau - associate professor, "Victor Babes" University of Medicine and Pharmacy, Timisoara, senior consulting in internal medicine and cardiology,

Foreword

This material is intended to help 3rd-year medical school students learn and prepare for the 1st-semester exam in medical semiology.

The structure of this book follows our lecture pattern to facilitate learning.

Each chapter proposes five types of questions: mixed questions with a single best answer, progressive questions with multiple correct answers (more than one, but fewer than five), advanced clinical vignettes also with multiple correct answers, assertion-reason questions with a single best answer, and, at the end of each chapter, the difficult and very difficult questions.

For the assertion-reason questions, analyse them as follows. At the beginning, the student must analyse the assertion and decide whether it is true or false. After that, the student must analyse the reason statement, also from a true-or-false perspective. If both of the statements are true, the student must think whether there is a link between them, and if the second one explains the first one.

For difficult or very difficult questions, the questions marked with " * " have a single best answer.

And, because the purpose of this book is to help students to learn, we introduced a first chapter that explains the way to analyse the assertion-reason questions and the difficult and very difficult questions.

Please note that the questions that you will receive at the exam will not be from this book.

Table of Contents

How to approach assertion-reason and difficult questions?	8
Ciprian Ilie Rosca	8
How to Approach Assertion–Reason Questions	8
How to Approach Difficult / Very Difficult Questions - A guide to advanced clinical reasoning	10
Answer rationale for assertion-reason questions	12
Answer rationale for difficult questions	16
Chapter I. Introduction in medical semiology	20
Maria-Silvia Rosca, Melania Veronica Ardelean	20
Mixed questions	20
Progressive questions	28
Advanced Clinical Vignettes	36
Assertion-reason questions	46
Difficult questions	59
Chapter II. Patient's general evaluation	68
Nilima Rajpal Kundnani, Ciprian Ilie Rosca	68
Mixed questions	68
Progressive questions	77
Advanced Clinical Vignettes	86
Assertion-reason questions	96
Difficult questions	107
Chapter III. Taking history and symptoms in patient with respiratory disease	116
Cristian Andrei Sarau, Ciprian Ilie Rosca	116
Mixed questions	116
Progressive Questions	125
Advanced clinical vignettes	134
Assertion-reason questions	144
Difficult questions	156
Chapter IV. Physical examination in respiratory system	165
Ciprian Ilie Rosca, Cristian Andrei Sarau	165
Mixed questions	165
Progressive Questions	174
Advanced clinical vignettes	184
Assertion-reason questions	194
Difficult questions	206
Chapter V. Respiratory system diagnostic tests	216
Ariana Violeta Nicoras, Ciprian Ilie Rosca	216
Mixed questions	216
Progressive questions	225
Advanced clinical vignettes	234
Assertion-reason questions	245

Difficult questions	256
<i>Chapter VI. Semiology of Upper respiratory airways infections, Asthma, Hypersensibilisation pneumonia, Bronchiectasias, Chistic fibrosis</i>	265
Daniel Florin Lighezan, Ciprian Ilie Rosca	265
Mixed Questions	265
Progressive questions	274
Advanced clinical vignettes	283
Assertion-reason questions	294
Difficult questions	305
<i>Chapter VII. Semiology of Pneumonia, Pleural pathology, Mediastinum patrology</i>	314
Ruxandra Christodorescu, Ciprian Ilie Rosca	314
Mixed questions	314
Progressive questions	323
Advanced clinical vignettes	332
Assertion-reason questions	342
Difficult questions	353

How to approach assertion-reason and difficult questions?

Ciprian Ilie Rosca

How to Approach Assertion-Reason Questions

Assertion-Reason (A-R) questions are designed not only to test factual knowledge, but also to evaluate **logical thinking and causal reasoning**, which are essential skills in clinical practice.

Many students struggle with this type of question because they try to answer it too quickly. The correct approach is **systematic and stepwise**.

Step 1: Analyze the Assertion (A) alone

Before looking at the reason, ask yourself:

- Is the assertion **factually correct**?
- Does it correspond to what you know from lectures and clinical practice?

At this stage, **ignore the reason completely**. Treat the assertion as a true/false statement.

Step 2: Analyze the Reason (R) alone

Now evaluate the reason independently:

- Is the reason **factually correct**?
- Is it a valid medical statement on its own?

Again, do not connect it yet to the assertion.

Step 3: Evaluate the relationship between A and R

Only after judging A and R separately should you ask:

- Does the reason **correctly explain why** the assertion is true?
 - Is there a **clear causal relationship**, or are the two statements simply related facts?

This is the most important step – and the one that differentiates **memorization** from **clinical reasoning**.

Step 4: Choose the correct option

Use the following logic consistently:

- If **both A and R are true**, and **R explains A** → choose option A
- If **both A and R are true**, but **R does not explain A** → choose option B
- If **A is true** and **R is false** → choose option C
- If **A is false** and **R is true** → choose option D
- If **both A and R are false** → choose option E

Avoid guessing based on pattern recognition.
Each question must be reasoned through step by step.

Common mistakes to avoid

- Judging the reason only because the assertion is true
- Assuming causality when there is only association
 - Reading A and R as a single sentence instead of two independent statements
 - Relying on “sounds logical” instead of **pathophysiological explanation**

Why this matters clinically

In real clinical practice, physicians constantly evaluate:

- whether a statement is true,
- whether an explanation is valid,
- whether a conclusion logically follows from observed facts.

Assertion-Reason questions are a **training ground for this way of thinking**.

If you learn to solve them correctly, you are not just preparing for an exam –
you are training your **clinical judgment**.

How to Approach Difficult / Very Difficult Questions - A guide to advanced clinical reasoning

The **Difficult / Very Difficult** questions are designed to go beyond simple recall. Their goal is to assess your ability to **integrate information, interpret physical signs, and apply pathophysiological reasoning** – exactly what is required in real clinical practice.

These questions often feel challenging not because the content is unfamiliar, but because they require a **structured way of thinking**.

Step 1: Identify the key clinical clues

Before looking at the answer options, carefully read the question stem and identify:

- the **type of finding** (inspection, palpation, percussion, auscultation),
- whether the finding suggests **air, fluid, solid tissue, or mechanical restriction**,
- whether the process is likely **unilateral or bilateral**.

Do not rush to conclusions. One or two details usually carry most of the diagnostic weight.

Step 2: Translate signs into mechanisms

Ask yourself:

- What **mechanism** explains this sign?
 - increased density?
 - loss of aeration?
 - airway narrowing?
 - impaired sound transmission?
- Does the mechanism point toward:
 - pleural pathology,
 - pulmonary parenchymal disease,
 - airway disease,
 - chest wall abnormality?

This step is crucial. Difficult questions are almost always **mechanism-based**, not fact-based.

Step 3: Handle SBA questions (Single Best Answer)

For SBA questions:

- Look for the option that **explains all the findings together**, not just one of them.
- Eliminate answers that:
 - explain only part of the picture,
 - contradict a key sign,
 - are too general or too mild for the described findings.

The correct answer is usually the one that fits **best overall**, not the one that is "sometimes true."

Step 4: Handle questions with multiple correct answers

For questions with multiple correct answers:

- Evaluate **each option independently**.
- Do not assume that options are linked to each other.
- Ask for every statement:
 - Is this true **in this context**?
 - Does it fit the **mechanism implied by the stem**?

A common mistake is selecting options that are true in general, but **not applicable** to the specific scenario.

Step 5: Be careful with absolutes and extremes

In difficult questions, words like:

- *always*,
- *never*,
- *only*,
- *invariably*

are often clues that the statement is **incorrect**.

Clinical medicine rarely works in absolutes.

Step 6: Think like a clinician, not like a test-taker

In real life, clinicians do not ask:

"Which answer sounds right?"

They ask:

"Which diagnosis or mechanism best explains what I'm seeing?"

These questions are designed to train exactly that mindset.

Why this section matters

If you can consistently solve Difficult / Very Difficult questions, it means you are able to:

- synthesize clinical information,
- prioritize findings,
- reason from signs to mechanisms,
- avoid superficial pattern recognition.

These are **core clinical competencies**, not just exam skills.

Final advice to students

Take your time with these questions.

If you make mistakes, review **why** – that is where the real learning happens.

Getting a difficult question wrong, but understanding the rationale afterward, is often **more valuable** than getting an easy question right.

[Answer rationale for assertion-reason questions](#)

This small sub-chapter is intended to help you to learn how you may analyse one assertion-reason question and its answers, so you may choose the right one.

We will analyse the first ten questions from the Lecture 4, assertion-reason sub-chapter.

1. Assertion: Normal respiratory rate is 16-18/min.

Reason: Respiratory movements have regular rhythm and constant amplitude.

Correct answer: **B**

Rationale:

- The assertion is true: normal adult respiratory rate at rest is 16-18/min.
- The reason is also true: normal breathing is regular in rhythm and relatively constant in amplitude.
- However, rhythm and amplitude **do not explain the numerical value** of respiratory rate.
- Therefore, both are true, but there is **no causal relationship**.

2. Assertion: Barrel chest is associated with pulmonary emphysema.

Reason: Emphysema causes chronic lung hyperinflation and increased anteroposterior diameter.

Correct answer: **A**

Rationale:

- Barrel chest is a classic finding in emphysema.
- Hyperinflation leads to remodeling of the thoracic cage and increased AP diameter.
- The reason directly explains the assertion through a clear pathophysiological mechanism.

3. Assertion: Rachitic chest is caused by vitamin C deficiency.

Reason: Vitamin D deficiency leads to defective bone mineralization.

Correct answer: **D**

Rationale:

- Rachitic chest is **not** caused by vitamin C deficiency (that causes scurvy).
- It is caused by vitamin D deficiency, leading to poor bone mineralization.

- Therefore, the assertion is false and the reason is true.

4. Assertion: Pectus excavatum may be associated with reduced vital capacity.

Reason: Depression of the sternum can compress the heart and lungs.

Correct answer: **A**

Rationale:

- Severe pectus excavatum can reduce lung volumes, including vital capacity.
- Sternum depression may compress intrathoracic structures.
- The reason correctly explains the assertion.

5. Assertion: Inspiratory intercostal retractions indicate increased inspiratory effort.

Reason: They are caused by exaggerated negative intrathoracic pressure.

Correct answer: **A**

Rationale:

- Increased inspiratory effort generates strong negative intrathoracic pressure.
- This pressure pulls compliant intercostal spaces inward.
- The causal relationship between reason and assertion is correct.

6. Assertion: Tactile vocal fremitus is increased in lobar pneumonia with a patent bronchus.

Reason: Consolidated lung transmits vibrations better than aerated lung.

Correct answer: **A**

Rationale:

- In consolidation with an open bronchus, sound transmission is enhanced.
- Solid tissue conducts vibrations better than air-filled alveoli.
- The reason directly explains the assertion.

7. Assertion: Asymmetric chest expansion suggests unilateral pulmonary or pleural disease.

Reason: The affected lung shows reduced excursion compared to the normal side.

Correct answer: **A**

Rationale:

- Unilateral disease restricts movement on the affected side.
- Comparison with the healthy side reveals asymmetry.
- The reason is a direct mechanical explanation of the assertion.

8. Assertion: Damoiseau's curve represents the upper limit of pleural effusion.

Reason: Pleural fluid distributes evenly regardless of gravity.

Correct answer: **C**

Rationale:

- The assertion is true: Damoiseau's curve marks the upper limit of pleural fluid.
- The reason is false: pleural fluid distribution **is gravity-dependent**, not uniform.
- Therefore, A is true and R is false.

9. Assertion: Bronchial breath sounds over peripheral lung fields suggest consolidation.

Reason: Consolidation enhances transmission of bronchial sounds.

Correct answer: **A**

Rationale:

- Bronchial sounds outside their normal location are pathological.
- Consolidated lung acts as a better conductor for central airway sounds.
- The reason correctly explains the assertion.

10. Assertion: Pleural friction rub disappears after coughing.
Reason: It is caused by airflow through bronchial secretions.

Correct answer: **E**

Rationale:

- Pleural friction rub **does not** disappear after coughing.
- It is caused by friction between inflamed pleural layers, not secretions.
- Both the assertion and the reason are false.

[Answer rationale for difficult questions](#)

This small sub-chapter is intended to help you to learn how you may analyse one question and its answers, so you may choose the right one.

We will analyse the first ten questions from the Lecture 4, difficult and very difficult sub-chapter.

1. Percussion reveals dullness at the right lung base with a concave upper limit and a hyperresonant band immediately above it.

Correct answer: **D**

Rationale:

- Dullness with a concave upper limit corresponds to **Damoiseau's curve**, characteristic of pleural effusion.
- The hyperresonant band above represents **Skoda's resonance**, caused by compressed but still aerated lung.
- Lobar pneumonia produces dullness but not a curved upper limit or Skoda's resonance.
- Pneumothorax produces hyperresonance, not basal dullness.
- Diaphragmatic paralysis does not create this percussion pattern.

2. Regarding tactile vocal fremitus.

Correct answers: **A, B, E**

Rationale:

- Fremitus is **increased in pulmonary consolidation** with a patent bronchus because vibrations are transmitted more efficiently through solid tissue.
- It is **decreased in pneumothorax** due to interposed air.
- Chest wall thickness (obesity, muscle) directly influences fremitus perception.
- Fremitus is not absent in all obese patients, only reduced.
- It is **decreased**, not increased, in massive pleural effusion.

3. Bronchial breath sounds over a peripheral lung field.

Correct answer: **C**

Rationale:

- Bronchial breath sounds outside their normal location indicate **pulmonary consolidation with a patent bronchus**.
- Emphysema reduces sound transmission.
- Asthma produces wheezes, not bronchial breathing.
- Pleural effusion usually abolishes breath sounds.
- Pulmonary edema does not typically produce localized bronchial breathing.

4. Regarding wheezes and rhonchi.

Correct answers: **A, B, D**

Rationale:

- Wheezes are **high-pitched**, musical sounds from narrowed airways.
- Rhonchi are **low-pitched**, usually originating in large bronchi.
- Both may change after coughing because secretions can be displaced.
- Wheezes and rhonchi are **continuous**, not discontinuous sounds.
- Pleural friction rub is pleural in origin, not bronchial.

5. Marked asymmetric chest expansion.

Correct answer: **C**

Rationale:

- Asymmetric expansion strongly suggests **unilateral pleural or pulmonary pathology**.
- Bilateral emphysema causes symmetrical limitation.
- Normal variants do not produce marked asymmetry.
- Upper airway obstruction affects ventilation globally, not unilaterally.
- Anxiety alters rate, not mechanical symmetry.

6. Percussion assessment of lung bases.

Correct answers: **A, B, E**

Rationale:

- Lung bases normally descend during deep inspiration.
- Reduced excursion is seen in restrictive disease and fibrosis.
- Normal excursion is approximately **6 cm**, not 1 cm.
- Hertz maneuver evaluates **apical**, not basal, resonance.
- Emphysema may cause bilateral reduction due to hyperinflation.

7. Scratchy sound during both respiratory phases, unchanged by coughing.

Correct answer: **C**

Rationale:

- These are classic features of a **pleural friction rub**.
- Crackles are discontinuous and often change after coughing.
- Wheezes are musical and bronchial.
- Stridor is inspiratory and cervical.
- Amphoric breathing is hollow and related to cavities.

8. Abolition of vesicular breath sounds.

Correct answers: **A, B, D**

Rationale:

- Massive pleural effusion and pneumothorax block sound transmission.
- Complete bronchial obstruction prevents airflow and sound generation.
- Mild bronchitis does not abolish breath sounds.
- The finding may be unilateral or bilateral depending on pathology.

9. Harsh inspiratory sound over the neck.

Correct answer: **C**

Rationale:

- A loud inspiratory sound heard best over the neck is **stridor**.
- Wheezes and rhonchi are bronchial and usually expiratory.
- Crackles are discontinuous.
- Pleural friction rub is localized to the chest wall, not the neck.

10. Severe thoracic deformities.

Correct answers: **A, B, D**

Rationale:

- Severe deformities may reduce lung volumes and alter mechanics.
- Increased work of breathing may result from chest wall restriction.
- Some patients remain minimally symptomatic despite deformity.
- Thoracic expansion is not invariably increased.
- Cardiopulmonary function **can** be affected in severe cases.

Chapter I. Introduction in medical semiology

Maria-Silvia Rosca, Melania Veronica Ardelean

Mixed questions

1. Medical semiology primarily deals with:
 - A. Laboratory diagnosis
 - B. Imaging techniques
 - C. Identification and interpretation of clinical signs and symptoms
 - D. Therapeutic decision-making
 - E. Epidemiological analysis

Correct answer: C

2. The main purpose of the medical interview is to:
 - A. Replace physical examination
 - B. Confirm laboratory findings
 - C. Collect subjective and objective clinical information
 - D. Establish treatment immediately
 - E. Reduce consultation time

Correct answer: C

3. The **chief complaint** is best defined as:
 - A. The physician's preliminary diagnosis
 - B. The most severe symptom identified
 - C. The patient's reason for seeking medical care, in their own words
 - D. A summary of symptoms
 - E. A coded medical diagnosis

Correct answer: C

4. Which of the following is considered a **symptom**?
 - A. Fever measured at 39°C
 - B. Crackles heard on auscultation
 - C. Chest pain described by the patient
 - D. Elevated blood pressure
 - E. Cyanosis of lips

Correct answer: C

5. Which finding is a **clinical sign**?

- A. Dyspnea reported by the patient
- B. Fatigue sensation
- C. Palpitations
- D. Jugular venous distension
- E. Chest tightness

Correct answer: D

6. Fever, weight loss, and night sweats are classified as:

- A. Local symptoms
- B. Functional symptoms
- C. Constitutional symptoms
- D. Pathognomonic signs
- E. Paraclinical findings

Correct answer: C

7. Which statement about clinical signs is correct?

- A. They are always disease-specific
- B. They depend on patient perception
- C. They are objective findings
- D. They exclude the need for history
- E. They appear only in advanced disease

Correct answer: C

8. A complete medical history includes all EXCEPT:

- A. Past medical history
- B. Family history
- C. Social history
- D. Physical examination
- E. Medication history

Correct answer: D

9. The first step of physical examination is:

- A. Palpation
- B. Percussion
- C. Auscultation
- D. Inspection
- E. Functional testing

Correct answer: D

10. Inspection allows the physician to assess all EXCEPT:

- A. Posture
- B. Facial expression
- C. Skin color
- D. Organ consistency
- E. Body habitus

Correct answer: D

11. Palpation is useful for assessing:

- A. Sound transmission
- B. Tissue consistency and tenderness
- C. Air-fluid levels
- D. Cardiac rhythm
- E. Breath sounds

Correct answer: B

12. Percussion is mainly used to evaluate:

- A. Blood flow velocity
- B. Tissue density
- C. Muscle tone
- D. Nerve conduction
- E. Cardiac valves

Correct answer: B

13. Auscultation is particularly important for evaluating:

- A. Abdominal organ size
- B. Skin lesions
- C. Cardiovascular and respiratory sounds
- D. Reflexes
- E. Bone density

Correct answer: C

14. Which statement about auscultation is TRUE?

- A. It replaces inspection
- B. It detects only pathological sounds
- C. It requires patient cooperation
- D. It is independent of anatomy
- E. It is rarely used today

Correct answer: C

15. Why is clinical context essential in semiology?

- A. Signs are always specific
- B. One symptom usually gives a diagnosis
- C. Interpretation depends on associated findings
- D. It replaces laboratory tests
- E. It reduces examination time

Correct answer: C

16. Which statement about pain is correct?

- A. Pain intensity always reflects disease severity
- B. Pain perception is uniform among patients
- C. Pain is always pathological
- D. Pain is subjective
- E. Pain is always measurable

Correct answer: D

17. Which factor most influences pain perception?

- A. Age only
- B. Sex only
- C. Psychological and cultural factors
- D. Blood pressure
- E. Body temperature

Correct answer: C

18. Vital signs include all EXCEPT:

- A. Blood pressure
- B. Heart rate
- C. Respiratory rate
- D. Oxygen saturation
- E. Body mass index

Correct answer: E

19. Vital signs are important because they:

- A. Are diagnostic by themselves
- B. Reflect immediate physiological status
- C. Replace imaging
- D. Are optional
- E. Are subjective

Correct answer: B

20. A single clinical sign is usually:

- A. Diagnostic
- B. Pathognomonic
- C. Sufficient for treatment
- D. Nonspecific when isolated
- E. Always irrelevant

Correct answer: D

21. Which of the following is part of **general examination**?

- A. Cardiac auscultation
- B. Lung percussion
- C. Evaluation of general appearance
- D. Neurological reflexes
- E. Abdominal palpation

Correct answer: C

22. Which statement about normal variants is TRUE?

- A. They always indicate disease
- B. They should be ignored
- C. They may mimic pathology
- D. They are rare
- E. They are always symptomatic

Correct answer: C

23. Why is semiology essential for diagnosis?

- A. It replaces imaging
- B. It reduces costs only
- C. It guides clinical reasoning
- D. It eliminates uncertainty
- E. It standardizes therapy

Correct answer: C

24. Which part of history most influences risk assessment?

- A. Chief complaint
- B. Family history
- C. Review of systems
- D. Physical exam
- E. Vital signs

Correct answer: B

25. The medical interview should be:

- A. Physician-centered
- B. Rigid and standardized
- C. Patient-centered and structured
- D. As short as possible
- E. Performed after examination

Correct answer: C

26. Which finding is obtained ONLY by inspection?

- A. Tenderness
- B. Organ enlargement
- C. Skin color changes
- D. Resonance
- E. Murmurs

Correct answer: C

27. Palpation should be performed:

- A. Before inspection
- B. After auscultation
- C. Gently and progressively
- D. Only if pain is present
- E. Without patient explanation

Correct answer: C

28. Percussion sounds vary according to:

- A. Examiner experience only
- B. Tissue composition
- C. Patient age only
- D. Instrument used
- E. Examiner hand size

Correct answer: B

29. Which principle best defines clinical reasoning?

- A. Memorisation of signs
- B. Isolated symptom analysis
- C. Integration of multiple findings
- D. Reliance on tests only
- E. Rapid decision-making

Correct answer: C

30. The ultimate goal of medical semiology is to:

- A. Describe symptoms
- B. Collect signs
- C. Build a differential diagnosis
- D. Confirm imaging
- E. Prescribe treatment

Correct answer: C

31. What is the final aim when we evaluate a patient?

- A. To establish a proper diagnosis
- B. To state the final diagnosis
- C. To restore the patient's health or to offer him or her the best quality of life if the illness cannot be cured
- D. To improve communication within the medical team
- E. To perform a differential diagnosis

Correct answer: C

32. When identifying a patient, we will obtain his or her:

- A. Age
- B. Gender
- C. Full name
- D. Occupation
- E. Marital status

Correct answer: C

33. The following answer is not part of the 7 attributes of a symptom:

- A. Location and radiation.
- B. Severity.
- C. Situations in which the symptom occurs.
- D. Level at which the symptom is felt.
- E. Associated manifestations.

Correct answer: D.

34. Which element is ESSENTIAL for transforming clinical data into diagnosis?

- A. Memorization of signs
- B. Use of algorithms only
- C. Clinical reasoning
- D. Extensive investigations
- E. Experience alone

Correct answer: C.

35. Which interview technique best encourages spontaneous patient narration?

- A. Closed-ended questions
- B. Leading questions
- C. Open-ended questions
- D. Multiple simultaneous questions
- E. Interrupting frequently

Correct answer: C

36. Which characteristic best differentiates a symptom from a sign?

- A. Severity
- B. Objectivity
- C. Duration
- D. Localization
- E. Prognostic value

Correct answer: B.

37. Which attribute of a symptom best reflects its impact on daily life?

- A. Location
- B. Radiation
- C. Intensity
- D. Temporal profile
- E. Associated signs

Correct answer: C

38. Why is social history important in medical semiology?

- A. It replaces family history
- B. It confirms diagnosis
- C. It identifies risk factors
- D. It reduces interview time
- E. It excludes organic disease

Correct answer: C

39. Which examination step provides the first global impression of the patient?

- A. Palpation
- B. Percussion
- C. Auscultation
- D. Inspection
- E. Functional testing

Correct answer: D

40. Which vital sign is MOST sensitive to early physiological deterioration?

- A. Body temperature
- B. Heart rate
- C. Blood pressure
- D. Oxygen saturation
- E. Body mass index

Correct answer: B.

Progressive questions

1. A 56-year-old patient presents for evaluation. During the encounter, the physician focuses on semiological analysis. Which elements are central to **medical semiology**?

- A. Identification of symptoms
- B. Interpretation of clinical signs
- C. Direct diagnosis without context
- D. Integration of findings
- E. Immediate therapeutic decisions

Correct answers: A, B, D

2. A clinician conducts a structured medical interview. Which objectives are achieved through a proper anamnesis?

- A. Identification of the chief complaint
- B. Assessment of symptom chronology
- C. Replacement of physical examination
- D. Understanding patient perspective
- E. Risk stratification

Correct answers: A, B, D, E.

3. A patient reports chest pain. Which characteristics help define the symptom semiologically?

- A. Location
- B. Intensity
- C. Radiation
- D. Physician interpretation
- E. Temporal profile

Correct answers: A, B, C, E.

4. During evaluation, the physician distinguishes symptoms from signs. Which findings are **objective clinical signs**?

- A. Cyanosis of lips
- B. Dyspnea described by patient
- C. Fever measured at 38.5°C
- D. Jugular venous distension
- E. Fatigue sensation

Correct answers: A, C, D.

5. A patient presents with weight loss, fever, and night sweats. These findings suggest:

- A. Constitutional symptoms
- B. Systemic disease
- C. Localized pathology only
- D. Possible malignancy or infection
- E. Functional complaints

Correct answers: A, B, D.

6. When collecting past medical history, which elements may influence current disease risk?

- A. Previous illnesses
- B. Past surgeries
- C. Family history
- D. Social habits
- E. Current vital signs only

Correct answers: A, B, C, D.

7. Inspection is performed before palpation because it allows:

- A. Observation without patient discomfort
- B. Identification of posture abnormalities
- C. Detection of skin color changes
- D. Assessment of organ consistency
- E. Initial global evaluation

Correct answers: A, B, C, E.

8. During general inspection, which aspects are evaluated?

- A. Body habitus
- B. Facial expression
- C. Level of consciousness
- D. Organ tenderness
- E. Nutritional status

Correct answers: A, B, C, E.

9. Palpation provides information about:

- A. Tissue temperature
- B. Tenderness
- C. Organ size
- D. Resonance
- E. Consistency

Correct answers: A, B, C, E.

10. Percussion findings depend mainly on:

- A. Tissue density
- B. Presence of air or fluid
- C. Examiner experience only
- D. Underlying anatomical structures
- E. Patient cooperation

Correct answers: A, B, D.

11. Auscultation is particularly useful for detecting:

- A. Heart sounds
- B. Lung sounds
- C. Bowel sounds
- D. Skin temperature
- E. Vascular murmurs

Correct answers: A, B, C, E.

12. Proper auscultation requires:

- A. Quiet environment
- B. Correct stethoscope placement
- C. Patient cooperation
- D. Knowledge of anatomy
- E. Palpation first in all cases

Correct answers: A, B, C, D.

13. Which principles guide correct semiological interpretation?

- A. Contextual analysis
- B. Integration of multiple signs
- C. Reliance on one pathognomonic sign
- D. Correlation with history
- E. Awareness of normal variants

Correct answers: A, B, D, E.

14. Pain assessment should include:

- A. Onset
- B. Duration
- C. Intensity
- D. Emotional impact
- E. Laboratory confirmation

Correct answers: A, B, C, D.

15. Pain perception may be influenced by:

- A. Psychological factors
- B. Cultural background
- C. Previous experiences
- D. Patient age
- E. Examiner technique

Correct answers: A, B, C, D.

16. Vital signs are useful because they:

- A. Reflect acute physiological changes
- B. Detect early clinical deterioration
- C. Replace clinical examination
- D. Are objective measurements
- E. Are independent of context

Correct answers: A, B, D.

17. Which parameters are considered vital signs?

- A. Heart rate
- B. Blood pressure
- C. Respiratory rate
- D. Oxygen saturation
- E. Body mass index

Correct answers: A, B, C, D.

18. A single isolated clinical sign is often:

- A. Nonspecific
- B. Insufficient for diagnosis
- C. Context-dependent
- D. Always pathological
- E. Misleading if interpreted alone

Correct answers: A, B, C, E.

19. Normal variants should be considered because they:

- A. May mimic disease
- B. Occur in healthy individuals
- C. Always require treatment
- D. Can lead to overdiagnosis
- E. Are part of semiological reasoning

Correct answers: A, B, D, E.

20. A patient-centered interview implies:

- A. Active listening
- B. Empathy
- C. Allowing patient narration
- D. Ignoring structure
- E. Adapting questions

Correct answers: A, B, C, E.

21. Social history contributes to diagnosis by revealing:

- A. Smoking habits
- B. Alcohol consumption
- C. Occupational exposures
- D. Genetic mutations
- E. Lifestyle risk factors

Correct answers: A, B, C, E.

22. General appearance may suggest severe illness when associated with:

- A. Altered posture
- B. Poor nutritional status
- C. Abnormal facial expression
- D. Normal vital signs
- E. Reduced responsiveness

Correct answers: A, B, C, E.

23. Semiology supports differential diagnosis by:

- A. Structuring clinical reasoning
- B. Integrating data
- C. Eliminating uncertainty completely
- D. Prioritizing hypotheses
- E. Guiding further investigations

Correct answers: A, B, D, E.

24. The order inspection → palpation → percussion → auscultation is used because it:

- A. Minimizes patient discomfort
- B. Prevents alteration of findings
- C. Is universally mandatory
- D. Allows progressive data collection
- E. Preserves semiological logic

Correct answers: A, B, D, E.

25. Which statements about symptoms are correct?

- A. They are subjective
- B. They depend on patient reporting
- C. They can be quantified indirectly
- D. They are always specific
- E. They guide diagnostic orientation

Correct answers: A, B, C, E.

26. Which statements about clinical signs are true?

- A. They are objective
- B. They can be observed or elicited
- C. They depend on examiner skill
- D. They replace patient history
- E. They require interpretation

Correct answers: A, B, C, E.

27. Correct semiological reasoning requires:

- A. Clinical experience
- B. Knowledge of physiology
- C. Awareness of disease patterns
- D. Exclusive reliance on tests
- E. Continuous hypothesis revision

Correct answers: A, B, C, E.

28. Inspection may reveal early disease through:

- A. Subtle posture changes
- B. Skin pallor or cyanosis
- C. Altered gait
- D. Internal organ enlargement
- E. Facial asymmetry

Correct answers: A, B, C, E.

29. A structured anamnesis improves diagnosis by:

- A. Reducing omissions
- B. Clarifying symptom evolution
- C. Standardizing patient responses
- D. Improving clinician focus
- E. Enhancing clinical reasoning

Correct answers: A, B, D, E.

30. The ultimate goal of advanced semiological analysis is to:

- A. Label symptoms
- B. Build a differential diagnosis
- C. Guide clinical decision-making
- D. Replace investigations
- E. Understand the patient's condition

Correct answers: B, C, E.

31. The following statements are true:

- A. Any sensation that a patient experiences is a symptom
- B. A sign is a subjective manifestation of a disease
- C. A symptom may present a regional aggregation
- D. Fever, chills, and excessive sweating are signs
- E. A general symptom may occur in any affected system of the human body

Correct answers: A, C, E

32. The chief complaint:

- A. Must be an association of fever, headache, and pressure over the left chest
- B. May be any of fever, headache, and pressure over the left chest
- C. Refers to symptoms that cause the patient to seek medical care
- D. Refers to concerns that cause the patient to seek medical help
- E. Cough may be an example

Correct answer: B, C, D, E

33. Which of the following statements are correct?

- A. Symptoms are subjective
- B. Fever is a symptom
- C. Fever is a sign
- D. Jaundice is a symptom
- E. Palpitation is a symptom

Correct answer: A, C, E

34. About the syndrome it can be said that:

- A. It is a combination of signs and symptoms.
- B. No supplementary investigations are needed to elucidate.
- C. Needs supplementary investigations to elucidate.
- D. A syndrome is specific for a single disease.
- E. Icteric syndrome occurs in hemolytic anemia.

Correct answer: A, C, E

35. The following statements are true about the anamnesis:

- A. Patient history is not relevant.
- B. Family diseases are relevant.
- C. Lifestyle is relevant.
- D. Medications used must be announced.
- E. Allergies are relevant.

Correct answer: B, C, D, E

36. The physical examination of the patient includes:

- A. Inspection of the entire body.
- B. Palpation is done only at the level of the lymph nodes.
- C. Percussion is done to evoke a sound wave such as resonance or dullness from the underlying tissue or organs.
- D. Auscultation is done only at the level of the heart to listen to the heart valves
- E. Auscultation is used to detect pulmonary sounds such as rales.

Correct answer: A, C, E.

37. The equipment used to perform a physical examination of a patient is:

- A. Laryngoscope
- B. Stethoscope
- C. Reflex hammer
- D. Gloves
- E. Syringe

Correct answer: B, C, D

Advanced Clinical Vignettes

1.** A patient reports "chest discomfort" during the interview. Which elements must be explored to correctly characterize this symptom semiologically?

- A. Location
- B. Radiation
- C. Intensity
- D. Patient's emotional reaction
- E. Temporal profile

Correct answers: A, B, C, E.

2.** A 54-year-old man presents for the first time complaining of "not feeling well." The physician begins with an open-ended question. Which objectives are best achieved at this stage of the consultation?

- A. Identification of the chief complaint
- B. Establishment of patient-physician rapport
- C. Immediate formulation of a final diagnosis
- D. Understanding the patient's perspective
- E. Orientation of further history taking

Correct answers: A, B, D, E

3.** A 42-year-old woman reports fatigue and shortness of breath, but physical examination is initially normal. Which statements are correct regarding this situation?

- A. Symptoms may exist without objective signs
- B. Functional disorders may present this way
- C. Absence of signs excludes disease
- D. Further evaluation is warranted
- E. Symptoms are always measurable

Correct answers: A, B, D

4.** A patient presents with fever, weight loss, and night sweats. Which interpretations are appropriate at this stage?

- A. These are constitutional symptoms
- B. They suggest systemic involvement
- C. They indicate a specific diagnosis
- D. They require contextual interpretation
- E. They may occur in several diseases

Correct answers: A, B, D, E.

5.** During anamnesis, the physician explores family history and lifestyle. Which reasons justify this approach?

- A. Identification of inherited risk factors
- B. Recognition of environmental exposures
- C. Replacement of physical examination
- D. Refinement of diagnostic hypotheses
- E. Evaluation of disease prognosis only

Correct answers: A, B, D.

6.** A student claims that one well-defined symptom is sufficient for diagnosis. Which arguments contradict this statement?

- A. Most symptoms are nonspecific
- B. Clinical context is essential
- C. A single symptom is often misleading
- D. Symptoms are always pathognomonic
- E. Integration of findings is required

Correct answers: A, B, C, E.

7.** Two patients describe identical pain intensity, but their reactions differ significantly. Which factors may explain this difference?

- A. Psychological background
- B. Cultural influences
- C. Prior pain experiences
- D. Examiner's expectations
- E. Individual pain perception

Correct answers: A, B, C, E.

8.** A patient presents with vague abdominal discomfort but no clear localization. Which conclusions are appropriate?

- A. Further clarification of symptom attributes is required
- B. Poor localization reduces diagnostic specificity
- C. The symptom should be ignored
- D. Repeated questioning may be necessary
- E. Functional causes should be considered

Correct answers: A, B, D, E

9.** A clinician integrates history and initial examination findings before ordering tests. Which principles of medical semiology are applied?

- A. Clinical reasoning
- B. Hypothesis generation
- C. Immediate confirmation bias
- D. Rational use of investigations
- E. Contextual interpretation

Correct answers: A, B, D, E.

10.** During the interview, a patient emphasizes fears rather than symptoms. Which approaches are appropriate?

- A. Active listening
- B. Exploration of patient concerns
- C. Ignoring emotional content
- D. Clarifying the chief complaint
- E. Maintaining interview structure

Correct answers: A, B, D, E

11.** A 67-year-old patient is examined in the emergency department. Before touching the patient, the physician carefully observes posture, facial expression, and skin color. Which statements justify this approach?

- A. Inspection may reveal early signs of severe illness
- B. Inspection replaces palpation
- C. General appearance provides global clinical information
- D. Some abnormalities are visible without physical contact
- E. Inspection is optional in stable patients

Correct answers: A, C, D

12.** During general physical examination, the physician follows the sequence inspection → palpation → percussion → auscultation. Which reasons support this order?

- A. It minimizes patient discomfort
- B. It preserves semiological logic
- C. It prevents alteration of findings
- D. It is mandatory in all clinical situations
- E. It allows progressive data acquisition

Correct answers: A, B, C, E

13.** While palpating the abdomen, the examiner detects tenderness and increased muscle tone. Which interpretations are appropriate?

- A. Palpation assesses tissue consistency
- B. Tenderness may indicate underlying pathology
- C. Examiner technique influences findings
- D. These findings are always diagnostic
- E. Further correlation is required

Correct answers: A, B, C, E

14.** Percussion reveals dullness over a specific area. Which conclusions are reasonable at this stage?

- A. The underlying tissue is likely solid or fluid-filled
- B. Percussion findings depend on tissue density
- C. Dullness is always pathological
- D. Correlation with other findings is necessary
- E. Additional examination techniques are useful

Correct answers: A, B, D, E

15.** During auscultation, abnormal sounds are detected. Which principles should guide interpretation?

- A. Knowledge of anatomical landmarks
- B. Correlation with clinical context
- C. Immediate final diagnosis
- D. Awareness of normal variants
- E. Repetition if findings are unclear

Correct answers: A, B, D, E

16.** A patient appears pale, anxious, and diaphoretic on inspection. Which actions are appropriate?

- A. Consider acute systemic illness
- B. Ignore inspection findings
- C. Measure vital signs promptly
- D. Integrate findings into clinical reasoning
- E. Delay further evaluation

Correct answers: A, C, D

17.** Vital signs are obtained at the beginning of the examination. Which statements are correct?

- A. They provide objective data
- B. They may indicate early deterioration
- C. They replace detailed history
- D. They must be interpreted in context
- E. They are independent of patient condition

Correct answers: A, B, D

18.** A patient presents with signs that resemble pathology but are later identified as normal variants. Which statements apply?

- A. Normal variants may mimic disease
- B. Misinterpretation may lead to overdiagnosis
- C. Normal variants are always rare
- D. Clinical judgment is required
- E. Awareness of normal variants improves accuracy

Correct answers: A, B, D, E

19.** A clinician integrates inspection, palpation, percussion, and auscultation findings before ordering investigations. Which semiological principles are applied?

- A. Integration of multiple findings
- B. Hypothesis-driven reasoning
- C. Exclusive reliance on technology
- D. Rational use of tests
- E. Contextual interpretation

Correct answers: A, B, D, E

20.** During physical examination, two examiners obtain slightly different findings in the same patient. Which factors may explain this discrepancy?

- A. Examiner experience
- B. Technique variation
- C. Patient cooperation
- D. Complete objectivity of examination
- E. Subjectivity inherent in some maneuvers

Correct answers: A, B, C, E

21.** A junior doctor focuses on a single striking symptom and ignores other findings. Which risks does this approach carry?

- A. Anchoring bias
- B. Missed alternative diagnoses
- C. Faster diagnostic accuracy
- D. Oversimplification of clinical reality
- E. Reduced need for further evaluation

Correct answers: A, B, D

22.** A clinician forms an early diagnostic hypothesis and selectively interprets data to support it. Which statements apply?

- A. This illustrates confirmation bias
- B. It improves diagnostic efficiency
- C. It may lead to diagnostic error
- D. Reassessment of hypotheses is necessary
- E. It represents good semiological practice

Correct answers: A, C, D

23.** A patient reports multiple vague complaints without clear objective findings. Which interpretations are appropriate?

- A. Symptoms may be nonspecific
- B. Functional disorders should be considered
- C. The complaints should be dismissed
- D. Contextual and longitudinal evaluation is useful
- E. Further exploration of symptom attributes is indicated

Correct answers: A, B, D, E

24.** A patient presents with constitutional symptoms but no localized signs. Which approaches are appropriate?

- A. Consider systemic disease
- B. Delay evaluation until signs appear
- C. Maintain a broad differential diagnosis
- D. Integrate history with repeated examinations
- E. Assume a benign condition

Correct answers: A, C, D

25.** A student believes that technology can replace careful clinical evaluation. Which arguments counter this belief?

- A. Clinical examination guides test selection
- B. Overuse of investigations may cause harm
- C. Technology eliminates diagnostic uncertainty
- D. Semiological reasoning remains essential
- E. Tests must be interpreted in context

Correct answers: A, B, D, E

26.** During physical examination, subtle abnormalities are overlooked. Which factors may contribute to this error?

- A. Inadequate inspection
- B. Time pressure
- C. Poor examination technique
- D. Exclusive reliance on patient complaints
- E. Systematic and thorough examination

Correct answers: A, B, C, D

27.** A clinician revises an initial diagnosis after new findings emerge. Which semiological principles are demonstrated?

- A. Dynamic clinical reasoning
- B. Flexibility of hypotheses
- C. Premature closure
- D. Integration of new data
- E. Cognitive rigidity

Correct answers: A, B, D

28.** Two clinicians interpret the same symptom differently. Which explanations are plausible?

- A. Variability in clinical experience
- B. Differences in contextual interpretation
- C. Complete objectivity of symptoms
- D. Influence of cognitive bias
- E. Absence of standardized reasoning

Correct answers: A, B, D, E

29.** A comprehensive clinical evaluation combines history, examination, and reasoning. Which outcomes are expected?

- A. Improved diagnostic accuracy
- B. Reduced unnecessary investigations
- C. Immediate certainty in all cases
- D. Better prioritization of hypotheses
- E. Enhanced patient understanding

Correct answers: A, B, D, E.

30.** A clinician acknowledges uncertainty and plans follow-up rather than forcing a diagnosis. Which statements apply?

- A. This reflects sound semiological practice
- B. Diagnostic humility reduces error
- C. Uncertainty always indicates incompetence
- D. Iterative assessment is appropriate
- E. Clinical reasoning is complete at first visit

Correct answers: A, B, D

31.** A clinician collects a detailed history before physical examination. Which advantages does this approach offer?

- A. Orientation of focused examination
- B. Identification of key diagnostic hypotheses
- C. Elimination of need for examination
- D. More efficient use of consultation time
- E. Improved patient cooperation

Correct answers: A, B, D, E

32.** A patient presents with multiple complaints of varying relevance. Which strategies help prioritize information?

- A. Identifying the chief complaint
- B. Assessing symptom chronology
- C. Giving equal weight to all complaints
- D. Evaluating symptom impact on function
- E. Linking symptoms to possible systems

Correct answers: A, B, D, E

33.** A patient reports pain that is poorly localized and variable in intensity. Which interpretations are appropriate?

- A. Pain description may be influenced by perception
- B. Poor localization reduces diagnostic specificity
- C. Pain must reflect severe pathology
- D. Further characterization is necessary
- E. Functional causes should be considered

Correct answers: A, B, D, E

34.** A clinician considers both pathological findings and normal variants during evaluation. Which benefits result from this approach?

- A. Reduction of overdiagnosis
- B. Improved diagnostic accuracy
- C. Elimination of uncertainty
- D. Avoidance of unnecessary investigations
- E. Better patient reassurance

Correct answers: A, B, D, E

35.** Physical examination reveals subtle but consistent abnormalities across multiple systems. Which conclusions are reasonable?

- A. Findings should be integrated rather than isolated
- B. Subtle signs may be clinically meaningful
- C. Each finding must indicate a different disease
- D. Correlation with history is essential
- E. Further evaluation is justified

Correct answers: A, B, D, E

36.** A clinician builds a differential diagnosis based on semiological data. Which principles guide this process?

- A. Pattern recognition
- B. Hypothesis prioritization
- C. Immediate diagnostic closure
- D. Iterative reassessment
- E. Contextual interpretation

Correct answers: A, B, D, E

37.** During the interview, the clinician balances empathy with structure. Which outcomes are achieved?

- A. Better information quality
- B. Stronger patient-physician relationship
- C. Loss of diagnostic focus
- D. Improved adherence to evaluation
- E. Enhanced clinical efficiency

Correct answers: A, B, D, E

38.** A symptom is common to many diseases. Which strategies help avoid diagnostic error?

- A. Broad differential diagnosis
- B. Correlation with other findings
- C. Immediate exclusion of rare diseases
- D. Follow-up and reassessment
- E. Awareness of cognitive bias

Correct answers: A, B, D, E

39.** A clinician reflects on possible reasoning errors during evaluation. Which behaviors reduce diagnostic mistakes?

- A. Metacognitive awareness
- B. Willingness to revise hypotheses
- C. Rigid adherence to first impression
- D. Systematic data integration
- E. Acceptance of uncertainty

Correct answers: A, B, D, E

40.** At the end of the consultation, the clinician summarizes findings and plans follow-up. Which purposes does this serve?

- A. Validation of shared understanding
- B. Reinforcement of diagnostic reasoning
- C. Elimination of future reassessment
- D. Improved patient engagement
- E. Structured continuation of care

Correct answers: A, B, D, E

Assertion-reason questions

All the questions from this paragraph will follow the standard format: A is an assertion, R is a reason. Options: A/B/C/D/E. You have to choose which option represents the correct answer.

1. **A:** Medical semiology focuses on identifying clinical signs and symptoms.

R: The purpose of semiology is to interpret patient findings to reach a diagnosis.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false.

Correct answer: A

2. **A:** Symptoms are subjective phenomena reported by the patient.

R: They can be measured directly by the physician.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false.

Correct answer: C.

3. **A:** Clinical signs are objective findings observed during physical examination.

R: They do not depend on the patient's perception.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false.

Correct answer: A

4. **A:** The medical interview is the first step in clinical evaluation.

R: It provides essential information that guides the physical examination.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false.

Correct answer: A.

5. **A:** The chief complaint is always the same as the diagnosis.

R: It describes the patient's reason for seeking care in their own words.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false.

Correct answer: C.

6. **A:** A complete history includes past medical, family, and social information.

R: These elements can influence present disease risk and presentation.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false.

Correct answer: A.

7. **A:** Fever, weight loss, and night sweats are considered constitutional symptoms.

R: They indicate systemic involvement rather than a localized condition.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false.

Correct answer: A

8. **A:** The physical examination begins with inspection.

R: Visual evaluation often reveals subtle abnormalities without touching the patient.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false.

Correct answer: A

9. **A:** Palpation is useful only for identifying painful areas.

R: It cannot assess organ size or texture.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false.

Correct answer: E

10. **A:** Percussion helps determine whether tissues are air-filled, fluid-filled, or solid.

R: It produces characteristic sounds based on tissue density.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false.

Correct answer: A.

11. **A:** Auscultation is essential for evaluating respiratory and cardiovascular systems.

R: Many physiological processes generate sounds that reflect underlying pathology.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false.

Correct answer: A

12. **A:** Semiological interpretation must always consider context.

R: A single sign rarely provides a definitive diagnosis.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false.

Correct answer: A

13. **A:** The absence of a symptom excludes the disease.

R: Some diseases present with atypical or silent clinical patterns.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false.

Correct answer: D

14. **A:** Vital signs represent the most objective clinical indicators.

R: They reflect immediate physiological status and can detect early deterioration.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false.

Correct answer: A.

15. **A:** Pain intensity reliably correlates with the severity of disease.

R: Pain perception varies widely between individuals.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false.

Correct answer: D

16. **A:** Semiological diagnosis often requires combining multiple findings.

R: Most clinical signs and symptoms are nonspecific when taken alone.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false.

Correct answer: A.

17. **A:** A complete physical exam is identical for every patient.

R: Standardization improves diagnostic yield.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false.

Correct answer: C

18. **A:** The general appearance of the patient provides valuable diagnostic clues.

R: Posture, facial expression, and nutritional status reflect underlying conditions.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false.

Correct answer: A

19. **A:** The presence of a sign automatically implies pathology.

R: Some signs can be normal variants without clinical significance.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false.

Correct answer: D.

20. **A:** Medical semiology precedes paraclinical investigations in the diagnostic process.

R: Clinical evaluation helps determine which tests are necessary and appropriate.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A.

21. **A:** An open-ended question is preferable at the beginning of the medical interview.

R: It allows the patient to express symptoms without premature direction.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A.

22. **A:** The chief complaint should be reformulated using medical terminology immediately.

R: Using the patient's own words preserves the original meaning of symptoms.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: D

23. **A:** A symptom can exist in the absence of objective clinical signs.

R: Functional disorders may present with symptoms despite normal examination.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A

24. **A:** A clinical sign is independent of examiner interpretation.

R: Objective findings still require clinical judgment to determine significance.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: D.

25. **A:** Constitutional symptoms often suggest systemic disease.

R: They are rarely associated with localized pathological processes.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: B

26. **A:** Normal variants must be recognized to avoid diagnostic errors.

R: Misinterpreting normal findings as pathological may lead to overdiagnosis.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A.

27. **A:** Inspection can reveal early signs of severe illness.

R: Changes in posture, facial expression, or behavior may indicate systemic disease.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A.

28. **A:** Palpation findings may vary between examiners.

R: Manual examination is influenced by technique and experience.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A.

29. **A:** Percussion findings should always be interpreted in isolation.

R: Combining percussion with other examination methods improves accuracy.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: D.

30. **A:** Clinical reasoning is a dynamic and iterative process.

R: New information may confirm, modify, or reject initial diagnostic hypotheses.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A.

31. **A:** Medical semiology is fundamental to building a differential diagnosis.

R: Clinical signs and symptoms must be interpreted in relation to each other and to context.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A

32. **A:** Open-ended questions are preferred at the beginning of the medical interview.

R: They allow spontaneous patient narration and reduce interviewer bias.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A

33. **A:** Symptoms are always specific indicators of disease.

R: Most symptoms can occur in multiple pathological conditions.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: D

34. **A:** A patient may experience symptoms even when no objective signs are present.

R: Functional disorders can manifest without detectable physical abnormalities.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A

35. **A:** Constitutional symptoms usually suggest localized disease.

R: Fever, weight loss, and night sweats reflect systemic involvement.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: D

36. **A:** Failure to recognize normal variants may lead to diagnostic error.

R: Normal variants can mimic pathological findings.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A

37. **A:** Inspection is an essential part of the physical examination.

R: Important clinical information can be obtained before touching the patient.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A

38. **A:** Percussion and auscultation should be interpreted independently.

R: Combining multiple examination techniques improves diagnostic accuracy.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: D (pages 40-41 01 lecture - general semiology 1)

39. **A:** Vital signs must always be interpreted in clinical context.

R: Isolated vital sign abnormalities may be misleading.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A

40. **A:** Clinical reasoning is a dynamic process.

R: New information may confirm, modify, or refute initial hypotheses.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A

Difficult questions

1. * Which statement BEST defines the limitation of isolated semiological signs?
 - A. They are rarely observable
 - B. They are usually pathognomonic
 - C. They lack diagnostic specificity when taken alone
 - D. They depend only on examiner experience
 - E. They exclude disease in most cases

Correct answer: C

2. Errors in semiological reasoning are MOST likely when:
 - A. Signs are interpreted without context
 - B. Symptoms are correlated with history
 - C. Normal variants are ignored
 - D. Multiple findings are integrated
 - E. A single sign is overvalued

Correct answers: A, C, E

- 3.* Which interview style MOST compromises diagnostic accuracy?
 - A. Structured
 - B. Patient-centered
 - C. Empathic
 - D. Rigid and physician-dominated
 - E. Adaptive

Correct answer: D (slide 14 - 01 lecture - general semiology 1)

4. A poorly conducted anamnesis may lead to:
 - A. Missed diagnoses
 - B. Inappropriate investigations
 - C. Improved efficiency
 - D. Misinterpretation of symptoms
 - E. Faulty clinical hypotheses

Correct answers: A, B, D, E

5.* Which statement about pain assessment is MOST accurate?

- A. Pain intensity reflects disease severity
- B. Pain is an objective clinical sign
- C. Pain perception is uniform
- D. Pain description is influenced by psychological factors
- E. Pain always requires imaging

Correct answer: D

6. Which factors complicate pain interpretation?

- A. Cultural background
- B. Emotional state
- C. Prior pain experiences
- D. Examiner expectations
- E. Patient vocabulary

Correct answers: A, B, C, E

7.* Which scenario BEST illustrates a misleading symptom?

- A. Fever with infection
- B. Chest pain in myocardial infarction
- C. Dyspnea in anxiety disorder
- D. Weight loss in malignancy
- E. Night sweats in tuberculosis

Correct answer: C

8. Constitutional symptoms are diagnostically challenging because they:

- A. Are nonspecific
- B. Occur in multiple diseases
- C. Always indicate malignancy
- D. Require contextual interpretation
- E. May reflect systemic illness

Correct answers: A, B, D, E.

9.* Skipping inspection during physical examination MOST commonly leads to missing:

- A. Organ tenderness
- B. Cardiac murmurs
- C. Postural abnormalities
- D. Percussion dullness
- E. Abdominal rigidity

Correct answer: C.

10. Inspection provides critical clues in patients with:

- A. Altered consciousness
- B. Severe pain
- C. Subtle neurological deficits
- D. Internal organ masses
- E. Respiratory distress

Correct answers: A, B, C, E.

11.* Which palpation finding MOST strongly suggests pathology?

- A. Warm skin
- B. Mild tenderness
- C. Firm, irregular mass
- D. Patient discomfort
- E. Voluntary guarding

Correct answer: C

12. Limitations of palpation include:

- A. Examiner subjectivity
- B. Patient body habitus
- C. Inability to assess deep structures
- D. Complete lack of diagnostic value
- E. Dependence on patient cooperation

Correct answers: A, B, C, E.

13.* Percussion is LEAST useful for assessing:

- A. Lung consolidation
- B. Pleural effusion
- C. Organ size
- D. Cardiac rhythm
- E. Air-filled cavities

Correct answer: D

14. Percussion findings may be misleading when:

- A. The patient is obese
- B. There is overlapping pathology
- C. The examiner lacks experience
- D. Used in isolation
- E. Combined with auscultation

Correct answers: A, B, C, D.

15.* Auscultation findings should ALWAYS be interpreted in relation to:

- A. Patient age only
- B. Examiner hearing ability
- C. Anatomical location
- D. Time constraints
- E. Instrument quality only

Correct answer: C.

16. Errors in auscultation interpretation occur when:

- A. Anatomical landmarks are ignored
- B. Environmental noise is present
- C. Sounds are correlated with symptoms
- D. Examiner lacks training
- E. Findings are overinterpreted

Correct answers: A, B, D, E.

17.* Which principle BEST distinguishes expert from novice clinical reasoning?

- A. Faster decision-making
- B. Reliance on algorithms
- C. Integration of findings into patterns
- D. Memorization of signs
- E. Extensive testing

Correct answer: C.

18. Advanced semiological reasoning involves:

- A. Pattern recognition
- B. Hypothesis testing
- C. Contextual integration
- D. Exclusion of uncertainty
- E. Iterative reassessment

Correct answers: A, B, C, E.

19.* Which vital sign change is MOST immediately concerning?

- A. Mild tachycardia
- B. Low-grade fever
- C. Rapid drop in blood pressure
- D. Slight tachypnea
- E. Mild hypoxia at altitude

Correct answer: C.

20. Vital signs may be misleading when:

- A. Taken without clinical context
- B. Measured inaccurately
- C. Interpreted in isolation
- D. Repeated over time
- E. Affected by external factors

Correct answers: A, B, C, E.

21.* Which statement BEST defines a normal variant?

- A. A rare abnormality
- B. A disease precursor
- C. A benign deviation without pathology
- D. A sign requiring treatment
- E. A diagnostic error

Correct answer: C.

22. Failure to recognize normal variants may lead to:

- A. Overdiagnosis
- B. Patient anxiety
- C. Unnecessary tests
- D. Improved diagnostic accuracy
- E. Inappropriate treatment

Correct answers: A, B, C, E.

23.* Which factor MOST improves the quality of clinical reasoning?

- A. Time pressure
- B. Experience combined with reflection
- C. Protocol adherence alone
- D. Diagnostic certainty
- E. Reduced patient interaction

Correct answer: B.

24. Clinical reasoning deteriorates when:

- A. Bias influences interpretation
- B. Premature closure occurs
- C. Multiple hypotheses are considered
- D. Context is ignored
- E. Data are selectively used

Correct answers: A, B, D, E.

25.* Which cognitive error involves sticking to an initial diagnosis despite new data?

- A. Availability bias
- B. Anchoring bias
- C. Confirmation bias
- D. Framing effect
- E. Outcome bias

Correct answer: B

26. Strategies to reduce diagnostic error include:

- A. Reflective practice
- B. Structured reasoning
- C. Awareness of bias
- D. Ignoring uncertainty
- E. Re-evaluation of hypotheses

Correct answers: A, B, C, E.

27.* Which examination step is MOST vulnerable to examiner bias?

- A. Inspection
- B. Palpation
- C. Percussion
- D. Auscultation
- E. Vital sign measurement

Correct answer: B.

28. Subjectivity in physical examination is increased by:

- A. Examiner expectations
- B. Poor technique
- C. Patient anxiety
- D. Standardized methods
- E. Lack of experience

Correct answers: A, B, C, E.

29.* The MOST important safeguard against semiological error is:

- A. Technology
- B. Experience alone
- C. Systematic and reflective reasoning
- D. Extensive testing
- E. Time pressure

Correct answer: C

30. High-level semiological competence is characterized by:

- A. Flexibility of thinking
- B. Pattern recognition
- C. Awareness of limitations
- D. Overconfidence
- E. Continuous reassessment

Correct answers: A, B, C, E.

31. * Which feature BEST distinguishes expert clinical reasoning from novice reasoning?

- A. Speed of decision-making
- B. Reliance on protocols
- C. Pattern recognition and integration
- D. Extensive testing
- E. Diagnostic certainty

Correct answer: C

32. Cognitive biases that may affect semiological interpretation include:

- A. Anchoring
- B. Confirmation bias
- C. Availability bias
- D. Reflective reasoning
- E. Premature closure

Correct answers: A, B, C, E.

33.* Which interview behavior MOST increases the risk of missing key symptoms?

- A. Allowing patient narration
- B. Using open-ended questions
- C. Interrupting frequently
- D. Clarifying responses
- E. Summarizing findings

Correct answer: C

34. Symptoms may be diagnostically misleading when they are:

- A. Nonspecific
- B. Interpreted without context
- C. Correlated with objective signs
- D. Influenced by psychological factors
- E. Taken in isolation

Correct answers: A, B, D, E

35.* Which step of physical examination is MOST likely to be skipped under time pressure?

- A. Inspection
- B. Palpation
- C. Percussion
- D. Auscultation
- E. Vital signs

Correct answer: A

36. Errors during physical examination may result from:

- A. Poor technique
- B. Examiner fatigue
- C. Patient non-cooperation
- D. Strict adherence to sequence
- E. Inadequate experience

Correct answers: A, B, C, E

37.* Which reasoning error involves sticking to an initial diagnosis despite contradictory data?

- A. Availability bias
- B. Anchoring bias
- C. Confirmation bias
- D. Framing effect
- E. Outcome bias

Correct answer: B

38. Strategies that reduce diagnostic error include:

- A. Reflective practice
- B. Awareness of bias
- C. Hypothesis revision
- D. Premature closure
- E. Systematic reasoning

Correct answers: A, B, C, E

39.* Which statement about normal variants is MOST accurate?

- A. They are rare
- B. They always require treatment
- C. They may mimic disease
- D. They indicate pathology
- E. They are symptoms

Correct answer: C

40. High-level semiological competence is characterized by:

- A. Flexibility of thinking
- B. Pattern recognition
- C. Diagnostic humility
- D. Overconfidence
- E. Continuous reassessment

Correct answers: A, B, C, E

Chapter II. Patient's general evaluation

Nilima Rajpal Kundnani, Ciprian Ilie Rosca

Mixed questions

1. A 54-year-old woman enters your office walking with short, shuffling steps and turns her whole body at once. On inspection, you also note decreased facial expression. Which posture/gait abnormality is most likely present?

- A. Steppage gait
- B. Ataxic gait
- C. Parkinsonian gait
- D. Hemiplegic gait
- E. Antalgic gait

Correct answer: C

2. A patient shows yellow discoloration of the sclera and skin, with no signs of anemia or cyanosis. What laboratory mechanism best explains this clinical finding?

- A. Increased deoxyhemoglobin > 5 g%
- B. Decreased hemoglobin concentration
- C. Increased bilirubin > 2 mg%
- D. Increased peripheral vasoconstriction
- E. Hypertriglyceridemia

Correct answer: C

3. During palpation, you detect a hard, non-tender, fixed left supraclavicular lymph node. Which condition must be considered first?

- A. Acute bacterial infection
- B. Iron deficiency anemia
- C. Gastric carcinoma
- D. Viral pharyngitis
- E. Allergic angioedema

Correct answer: C

4. A patient with edema localized to the eyelids in the morning and bilaterally symmetrical pitting of the legs most likely has which underlying disorder?

- A. Hepatic cirrhosis
- B. Right-sided heart failure
- C. Deep vein thrombosis
- D. Nephrotic syndrome
- E. Myxedema

Correct answer: D

5. A 32-year-old woman presents with butterfly-shaped erythema across the cheeks and nose. Which systemic disease is most likely?

- A. Acromegaly
- B. Systemic lupus erythematosus
- C. Cushing's syndrome
- D. Hypothyroidism
- E. Systemic sclerosis

Correct answer: B

6. Which of the following statements is false?

- A. The face should be checked for asymmetries.
- B. Height greater than 200cm may suggest gigantism.
- C. Butterfly rash may suggest Lupus.
- D. Edema around the eyes and dry skin may suggest Hyperthyroidism
- E. Nose and mandibular prognathism; enlarged ears, lips and tongue may suggest Acromegaly.

Correct answer: D

7. The primary purpose of general inspection during clinical examination is to:

- A. Establish a final diagnosis
- B. Replace physical examination
- C. Obtain a global impression of the patient
- D. Evaluate organ function
- E. Measure vital signs

Correct answer: C

8. Which anatomical term describes movement of a structure away from the median plane?

- A. Adduction
- B. Inversion
- C. Eversion
- D. Retraction
- E. Flexion

Correct answer: C

9. Which anatomical plane lies immediately superficial to bone?

- A. Cutaneous plane
- B. Subcutaneous plane
- C. Muscular plane
- D. Fascial plane
- E. Visceral plane

Correct answer: C.

10. A patient with pleuritic chest pain most commonly adopts which position?

- A. Supine
- B. Prone
- C. Lateral decubitus on the affected side
- D. Lateral decubitus on the healthy side
- E. Sitting upright with arms raised

Correct answer: D.

11. Which posture is typically adopted by a patient with dyspnea?

- A. Supine
- B. Sitting position
- C. Trendelenburg position
- D. Lateral decubitus
- E. Knee-chest position

Correct answer: B.

12. Which palpation technique allows assessment of deeper structures?

- A. Light palpation
- B. Superficial palpation
- C. Bimanual palpation
- D. Deep palpation
- E. Percussion

Correct answer: D

13. Which percussion sound is normally heard over healthy lung tissue?

- A. Dullness
- B. Flatness
- C. Tympany
- D. Hyperresonance
- E. Resonance

Correct answer: E

14. Tympanic percussion sounds are normally obtained over the:

- A. Liver
- B. Spleen
- C. Stomach
- D. Heart
- E. Lung bases

Correct answer: C

15. The Glasgow Coma Scale is used to evaluate:

- A. Cognitive performance
- B. Level of pain
- C. State of consciousness
- D. Degree of paralysis
- E. Brainstem reflexes

Correct answer: C

16. Bluish discoloration of the skin and mucous membranes is termed:

- A. Pallor
- B. Jaundice
- C. Hyperemia
- D. Cyanosis
- E. Petechia

Correct answer: D

17. Normal adult body temperature is approximately:

- A. 34–35°C
- B. 36–37°C
- C. 38–39°C
- D. 39–40°C
- E. 40–41°C

Correct answer: B

18. Which structure is normally assessed by palpation during physical examination?

- A. Cardiac valves
- B. Lung sounds
- C. Abdominal tenderness
- D. Pulmonary resonance
- E. Bowel sounds

Correct answer: C

19. A skin lesion larger than 0.5 cm containing serous fluid is termed:

- A. Vesicle
- B. Papule
- C. Bulla
- D. Ulcer
- E. Petechia

Correct answer: C.

20. Which skin lesion represents a deeper loss of skin surface that may bleed and scar?

- A. Vesicle
- B. Papule
- C. Macule
- D. Ulcer
- E. Purpura

Correct answer: D.

21. Generalized edema involving the entire body is called:

- A. Local edema
- B. Angioedema
- C. Lymphedema
- D. Anasarca
- E. Ascites

Correct answer: D.

22. Which mechanism is MOST responsible for cardiac edema?

- A. Decreased oncotic pressure
- B. Increased capillary permeability
- C. Increased hydrostatic pressure
- D. Lymphatic obstruction
- E. Sodium loss

Correct answer: C.

23. Which disease is a common cause of systemic edema?

- A. Hyperthyroidism
- B. Chronic heart failure
- C. Local infection
- D. Trauma
- E. Varicose veins

Correct answer: B.

24. Which type of edema is typically associated with portal hypertension?

- A. Cardiac edema
- B. Renal edema
- C. Hepatic edema
- D. Venous edema
- E. Allergic edema

Correct answer: C

25. Firm pitting edema with skin hyperpigmentation and thickening is characteristic of:

- A. Cardiac edema
- B. Renal edema
- C. Hepatic edema
- D. Venous edema
- E. Angioedema

Correct answer: D.

26. Which form of edema may become life-threatening due to airway involvement?

- A. Cardiac edema
- B. Renal edema
- C. Venous edema
- D. Hepatic edema
- E. Angioedema

Correct answer: E.

27. Which element is MOST important when assessing a patient's general appearance?

- A. Exact diagnosis
- B. Laboratory results
- C. Body habitus and posture
- D. Medication list
- E. Imaging findings

Correct answer: C.

28. Which term describes posterior movement of a structure from its neutral position?

- A. Protrusion
- B. Retraction
- C. Eversion
- D. Inversion
- E. Abduction

Correct answer: B

29. Which anatomical relationship is correct?

- A. The heart is inferior to the stomach
- B. The liver is superior to the lungs
- C. The muscular plane is superficial to the bone plane
- D. The skin is deep to the fascia
- E. The lungs are medial to the heart

Correct answer: C.

30. Which statement about palpation is TRUE?

- A. It can assess sounds
- B. It evaluates tissue temperature
- C. It is performed only superficially
- D. It is never subjective
- E. It replaces inspection

Correct answer: B.

31. Percussion allows the examiner to assess:

- A. Muscle strength
- B. Tissue density
- C. Nerve conduction
- D. Cardiac rhythm
- E. Reflex activity

Correct answer: B.

32. Which percussion sound is generated by emphysematous lung tissue?

- A. Resonance
- B. Dullness
- C. Flatness
- D. Tympany
- E. Hyperresonance

Correct answer: E

33. Which posture is MOST characteristic of a patient with severe pleural pain?

- A. Supine position
- B. Prone position
- C. Sitting upright
- D. Lateral decubitus on the healthy side
- E. Knee-chest position

Correct answer: D.

34. Which Glasgow Coma Scale score corresponds to a severe impairment of consciousness?

- A. 13-15
- B. 9-12
- C. 8 or less
- D. Exactly 10
- E. Only 7

Correct answer: C

35. Yellow discoloration of the skin and mucous membranes is termed:

- A. Cyanosis
- B. Pallor
- C. Hyperemia
- D. Jaundice
- E. Petechia

Correct answer: D

36. Petechiae are best defined as:

- A. Large hemorrhagic skin lesions
- B. Skin elevations with serous fluid
- C. Small pinpoint hemorrhages
- D. Deep bleeding into tissues
- E. Necrotic skin lesions

Correct answer: C

37. Which component of physical examination is used to assess superficial lymph nodes?

- A. Inspection only
- B. Percussion
- C. Auscultation
- D. Palpation
- E. Functional testing

Correct answer: D.

38. Which palpation technique is MOST appropriate for detecting tenderness?

- A. Percussion palpation
- B. Deep palpation only
- C. Light, superficial palpation
- D. Bimanual palpation exclusively
- E. Instrument-assisted palpation

Correct answer: C.

39. Which mechanism contributes MOST to renal edema formation?

- A. Increased hydrostatic pressure
- B. Increased capillary permeability
- C. Reduced plasma oncotic pressure
- D. Venous obstruction
- E. Lymphatic blockage

Correct answer: C

40. Which posture is MOST characteristic of a patient with severe dyspnea?

- A. Supine position
- B. Prone position
- C. Sitting upright, leaning forward
- D. Lateral decubitus
- E. Trendelenburg position

Correct answer: C.

Progressive questions

1.* Which of the following represents a *subjective* component of the general clinical examination?

- A. Inspection
- B. Palpation
- C. Percussion
- D. Anamnesis
- E. Auscultation

Correct answer: D

2.* During inspection, which condition must be met to correctly observe the patient's body surface and cavities?

- A. The patient must remain partially dressed
- B. Only artificial light is acceptable
- C. The room must be properly warmed and illuminated
- D. Inspection is done only with the patient standing
- E. Only static inspection is required

Correct answer: C

3.* Which percussion sound corresponds to a structure filled with normal air, such as healthy lung parenchyma?

- A. Dullness
- B. Flatness
- C. Tympany
- D. Hyperresonance
- E. Resonance

Correct answer: E

4.* Which of the following is the *correct* description of clubbing nails?

- A. Convex nails with hypertrophy of the distal phalanx
- B. Concave nails with central depression
- C. Brittle nails with vertical ridges
- D. Nails with yellow discoloration
- E. Nails with purulent accumulation under the nail plate

Correct answer: A

5.* Which type of lymph node abnormality is described as hard, non-tender, and fixed to surrounding tissues?

- A. Lymphadenitis
- B. Lymphoma
- C. Metastatic lymphadenopathy
- D. Reactive lymphadenopathy
- E. Viral infection

Correct answer: C

6. Elements of clinical anatomy:

- A. Retrusio=posterior movement of a structure from its neutral position
- B. Eversion=movement of the sole of the foot away from the median plane
- C. Protrusion=posterior movement of a structure from its neutral position
- D. The heart is positioned inferior to the stomach
- E. The muscular plane is superficial to the bone plane.

Correct answer: A, B, E.

7. Palpation of the patient can be done:

- A. Only superficially.
- B. Superficially and deeply
- C. With one finger or with the whole hand
- D. Only the contour and consistency can be determined.
- E. Palpation can be done without finding anything pathological

Correct answer: B, C, E

8. Percussion:

- A. Finger on finger - using the right middle finger as a hammer that percusses the left middle finger
- B. Can be made for a maximum depth of 7cm.
- C. Dullness - generated by the normal pulmonary parenchyma
- D. Tympany - generated by the stomach air bubble
- E. Hyperresonance - generated by the emphysematous lung

Correct answer: A, B, D E.

9. Which statements are false?

- A. In pleural pain patient rests on lateral decubitus on the healthy side
- B. In dyspnea patient sits down
- C. In meningitis the head is in flexion
- D. In torticollis the lateral cervical muscle is contracted
- E. In tetanus there are severe contractures of the dorsal muscles

Correct answer: A, D, E.

10. About the Glasgow scale we can say:

- A. The Glasgow scale evaluates the state of consciousness
- B. A score of 7 is severe
- C. A score of 7 is moderate
- D. If the painful stimulus makes extension it is a good sign
- E. The Glasgow scale evaluates the degree of coma

Correct answer: A, B.

11. About the skin and mucous tissues it can be stated:

- A. In anemia the skin and mucous tissues are pale.
- B. In low bilirubin levels the skin takes on a yellow color.
- C. In fever and inflammation the skin takes on a red color.
- D. In cyanosis the skin is green.
- E. In cyanosis the skin is blue.

Correct answer: A, C, E.

12. Lesions that can appear on the skin are:

- A. Bulla-skin elevation with serous fluid content < 0.5 cm
- B. Bulla-skin elevation with serous fluid content >0.5 cm
- C. Ulcer-a deeper loss of skin surface that may bleed and scar
- D. Purpura is smaller than petechia
- E. Hematoma-deep bleeding (in skin, muscle, joint) caused by severe trauma or bleeding disorders

Correct answer: B, C, E.

13. Causes of edema:

- A. Heart disease
- B. Liver disease
- C. Endocrine diseases are causes of local edema
- D. Angioedema is the cause of systemic edema
- E. Local edema appear in hypoalbuminemia

Correct answer: A, B.

14. Choose the true statements:

- A. Renal edema: increased hydrostatic pressure in veins and capillaries-loss of fluid in tissues
- B. Cardiac edema: may become generalized (anasarca) affecting the thighs, abdominal wall, pleural cavity, pericardial cavity.
- C. Hepatic edema: may occur due to portal hypertension.
- D. Venous edema: firm pitting with hyperpigmentation and thickening of skin
- E. Angioedema may require oro-tracheal intubation.

Correct answer: B, C, D, E.

15. Choose the false statements:

- A. Normal body temperature is 38-40 degrees.
- B. Lymph nodes can only be palpated at the axillary level.
- C. Breast inspection is done systematically in all quadrants using both hands.
- D. Trauma can induce fever.
- E. Atrophy is the increase in muscle volume.

Correct answer: C, D.

16. During general inspection, which elements should be systematically assessed?

- A. Body habitus
- B. Posture and attitude
- C. Skin color
- D. Laboratory values
- E. Facial symmetry

Correct answers: A, B, C, E.

17. Which statements correctly describe anatomical terminology used in clinical semiology?

- A. Retraction indicates posterior movement of a structure
- B. Protrusion indicates anterior movement of a structure
- C. Eversion refers to movement of the sole toward the median plane
- D. The muscular plane lies superficial to the bone plane
- E. Anatomical terms help standardize clinical descriptions

Correct answers: A, B, D, E

18. Palpation is useful for assessing which of the following?

- A. Tissue consistency
- B. Tenderness
- C. Local temperature
- D. Internal organ sounds
- E. Presence of masses

Correct answers: A, B, C, E

19. Which statements regarding percussion are correct?

- A. It evaluates underlying tissue density
- B. Resonance is normally heard over healthy lungs
- C. Tympany is normally produced by solid organs
- D. Hyperresonance may be heard in emphysema
- E. Percussion findings require clinical correlation

Correct answers: A, B, D, E

20. Certain diseases are associated with characteristic patient postures. Which statements are correct?

- A. Pleural pain may cause the patient to lie on the healthy side
- B. Dyspnea often leads to a sitting position
- C. Meningitis is associated with neck rigidity
- D. Torticollis involves contraction of cervical muscles
- E. Tetanus causes flaccid muscle relaxation

Correct answers: A, B, C, D

21. Regarding the Glasgow Coma Scale, which statements are correct?

- A. It assesses the level of consciousness
- B. A score of 7 indicates severe impairment
- C. It evaluates the depth of coma
- D. Extension to pain is a favorable sign
- E. It includes eye, verbal, and motor responses

Correct answers: A, B, C, E

22. Changes in skin color may indicate underlying pathology. Which associations are correct?

- A. Pallor may be seen in anemia
- B. Jaundice is caused by elevated bilirubin
- C. Cyanosis reflects increased oxygen saturation
- D. Hyperemia may occur in fever or inflammation
- E. Skin color changes are always localized

Correct answers: A, B, D

23. Which statements correctly describe primary skin lesions?

- A. Bullae contain serous fluid and are larger than vesicles
- B. Ulcers represent deep loss of skin surface
- C. Petechiae are large hemorrhagic lesions
- D. Hematomas involve deep bleeding into tissues
- E. Purpura is smaller than petechiae

Correct answers: A, B, D

24. Which conditions may lead to systemic edema?

- A. Heart failure
- B. Liver disease
- C. Hypoalbuminemia
- D. Local trauma
- E. Renal disease

Correct answers: A, B, C, E

25. Which statements about edema types are correct?

- A. Cardiac edema may become generalized
- B. Hepatic edema may be related to portal hypertension
- C. Venous edema is typically firm and hyperpigmented
- D. Angioedema is always limited to the lower limbs
- E. Angioedema may compromise the airway

Correct answers: A, B, C, E.

26. Which findings can be detected during general inspection of the patient?

- A. Facial asymmetry
- B. Abnormal posture
- C. Skin pallor or jaundice
- D. Organ consistency
- E. Body habitus

Correct answers: A, B, C, E

27. Which statements regarding anatomical planes and relationships are correct?

- A. The cutaneous plane is superficial
- B. The muscular plane lies deeper than the bone plane
- C. Anatomical terminology standardizes communication
- D. The heart is inferior to the stomach
- E. Superficial structures are closer to the skin

Correct answers: A, C, E.

28. Deep palpation is particularly useful for:

- A. Assessing deep organ size
- B. Detecting abdominal masses
- C. Evaluating tenderness
- D. Listening to bowel sounds
- E. Determining tissue resistance

Correct answers: A, B, C, E

29. Which percussion sounds may be encountered during physical examination?

- A. Resonance
- B. Dullness
- C. Flatness
- D. Tympany
- E. Crepitation

Correct answers: A, B, C, D.

30. Percussion findings may be influenced by:

- A. Underlying tissue composition
- B. Examiner technique
- C. Patient body habitus
- D. Environmental noise
- E. Clinical context

Correct answers: A, B, C, E

31. Which conditions are associated with characteristic patient positions?

- A. Pleural pain
- B. Dyspnea
- C. Meningitis
- D. Hyperthyroidism
- E. Torticollis

Correct answers: A, B, C, E

32. Regarding the Glasgow Coma Scale, which statements are correct?

- A. It evaluates eye opening
- B. It includes verbal response
- C. It includes motor response
- D. A score of 15 indicates coma
- E. Lower scores indicate more severe impairment

Correct answers: A, B, C, E.

33. Which skin findings may suggest systemic disease?

- A. Generalized pallor
- B. Diffuse jaundice
- C. Localized erythema only
- D. Widespread cyanosis
- E. Petechial rash

Correct answers: A, B, D, E

34. Which statements about hemorrhagic skin lesions are correct?

- A. Petechiae are small pinpoint hemorrhages
- B. Purpura are smaller than petechiae
- C. Hematomas involve deep bleeding
- D. Ulcers are hemorrhagic lesions by definition
- E. Hemorrhagic lesions may reflect coagulation disorders

Correct answers: A, C, E

35. Which mechanisms contribute to edema formation?

- A. Increased hydrostatic pressure
- B. Reduced oncotic pressure
- C. Increased capillary permeability
- D. Reduced lymphatic drainage
- E. Increased erythrocyte mass

Correct answers: A, B, C, D

36. During general inspection, which observations may suggest an underlying endocrine disorder?

- A. Disproportionate body size
- B. Facial asymmetry
- C. Abnormal fat distribution
- D. Changes in skin texture
- E. Localized skin infection

Correct answers: A, C, D

37. Which statements correctly describe anatomical movement terms?

- A. Protrusion refers to anterior movement of a structure
- B. Retraction refers to posterior movement of a structure
- C. Inversion moves the sole away from the median plane
- D. Eversion moves the sole away from the median plane
- E. Abduction moves a limb toward the median plane

Correct answers: A, B, D.

38. Which limitations should be considered when performing palpation?

- A. Findings may vary between examiners
- B. Deep structures may be difficult to assess
- C. Patient discomfort may limit examination
- D. Palpation is entirely objective
- E. Examiner technique influences results

Correct answers: A, B, C, E.

39. Which situations may lead to misleading percussion findings?

- A. Obesity
- B. Severe muscle tension
- C. Examiner inexperience
- D. Use of percussion alone
- E. Correlation with auscultation

Correct answers: A, B, C, D.

40. Which clinical features suggest that edema is systemic rather than local?

- A. Bilateral distribution
- B. Association with heart or liver disease
- C. Presence of erythema and warmth
- D. Generalized involvement
- E. Improvement with limb elevation only

Correct answers: A, B, D

Advanced Clinical Vignettes

1.** A 45-year-old man is evaluated during general inspection. The physician notices facial asymmetry, abnormal posture, and skin pallor. Which interpretations are appropriate?

- A. General inspection provides early diagnostic clues
- B. These findings may suggest systemic disease
- C. Facial asymmetry is always pathological
- D. Pallor may indicate anemia
- E. Inspection should be followed by focused examination

Correct answers: A, B, D, E.

2.** During physical examination, the examiner describes a structure as "retracted." Which statements are correct?

- A. Retraction indicates posterior movement
- B. Anatomical terminology ensures clear communication
- C. Retraction is synonymous with inversion
- D. These terms reduce ambiguity in clinical description
- E. Retraction always indicates pathology

Correct answers: A, B, D.

3.** A patient with pleuritic chest pain lies on one side and avoids deep breathing. Which conclusions are reasonable?

- A. The patient may adopt an antalgic position
- B. Lying on the healthy side may reduce pain
- C. This posture excludes pulmonary pathology
- D. Observation of posture has diagnostic value
- E. Pain influences patient positioning

Correct answers: A, B, D, E.

4.** During abdominal examination, the physician uses deep palpation. Which objectives can be achieved with this technique?

- A. Assessment of deep organ size
- B. Detection of abdominal masses
- C. Evaluation of bowel sounds
- D. Identification of tenderness
- E. Appreciation of tissue resistance

Correct answers: A, B, D, E

5.** Percussion over the right lower thorax reveals dullness. Which interpretations are appropriate?

- A. Dullness suggests solid or fluid-filled tissue
- B. Percussion findings depend on tissue density
- C. This finding alone establishes the diagnosis
- D. Correlation with other examination methods is required
- E. Normal lung parenchyma usually produces resonance

Correct answers: A, B, D, E.

6.** A patient has a Glasgow Coma Scale score of 7. Which statements are correct?

- A. This represents severe impairment of consciousness
- B. The patient is in coma
- C. The score reflects eye, verbal, and motor responses
- D. Extension to pain is a favorable sign
- E. The finding requires urgent clinical attention

Correct answers: A, B, C, E.

7.** A patient presents with bluish discoloration of lips and nail beds. Which conclusions are valid?

- A. This represents cyanosis
- B. It may reflect hypoxemia
- C. It always indicates local pathology
- D. It can be detected during inspection
- E. Correlation with oxygen saturation is useful

Correct answers: A, B, D, E

8.** Inspection of the skin reveals multiple pinpoint hemorrhagic lesions. Which statements apply?

- A. These lesions may be petechiae
- B. They may indicate coagulation disorders
- C. They represent deep bleeding
- D. They should be differentiated from purpura
- E. Size helps classify hemorrhagic lesions

Correct answers: A, B, D, E.

9.** A patient presents with bilateral lower-limb edema and ascites. Which interpretations are appropriate?

- A. The edema is likely systemic
- B. Liver disease should be considered
- C. Local trauma is the most likely cause
- D. Portal hypertension may contribute
- E. Hypoalbuminemia may play a role

Correct answers: A, B, D, E

10.** A patient develops sudden facial swelling with difficulty breathing. Which statements are correct?

- A. Angioedema should be considered
- B. Airway compromise is possible
- C. This condition is always localized to the face
- D. Urgent intervention may be required
- E. This represents a form of systemic edema

Correct answers: A, B, D.

11.** A 60-year-old woman is observed during general inspection. She appears cachectic, with dry skin and altered facial expression. Which interpretations are appropriate?

- A. General inspection may reveal systemic disease
- B. Cachexia suggests chronic illness
- C. Dry skin is always a normal variant
- D. Facial expression may reflect underlying pathology
- E. Inspection findings guide further evaluation

Correct answers: A, B, D, E.

12.** During examination, the clinician notes abnormal position of the foot, with the sole turned outward. Which statements are correct?

- A. This movement is called eversion
- B. Eversion moves the sole away from the median plane
- C. This terminology helps standardize descriptions
- D. Eversion always indicates pathology
- E. Anatomical terms reduce ambiguity

Correct answers: A, B, C, E.

13.** A patient with dyspnea is sitting upright, leaning forward, and using accessory muscles. Which conclusions are appropriate?

- A. This posture may facilitate breathing
- B. Dyspnea influences patient positioning
- C. Observation of posture has diagnostic value
- D. This posture excludes cardiac disease
- E. Accessory muscle use suggests respiratory distress

Correct answers: A, B, C, E.

14.** During abdominal palpation, the examiner notes guarding and tenderness. Which statements are correct?

- A. Guarding may indicate underlying pathology
- B. Tenderness is an objective sign
- C. Examiner technique influences findings
- D. Findings require correlation with history
- E. Palpation replaces percussion

Correct answers: A, C, D.

15.** Percussion of the thorax reveals hyperresonance. Which interpretations are appropriate?

- A. Hyperresonance may suggest emphysema
- B. Percussion findings depend on tissue density
- C. Hyperresonance is always pathological
- D. Correlation with auscultation is needed
- E. Normal lung parenchyma produces hyperresonance

Correct answers: A, B, D.

16.** A patient presents with altered consciousness. Glasgow Coma Scale evaluation is performed. Which statements apply?

- A. The scale evaluates eye opening
- B. The scale evaluates verbal response
- C. The scale evaluates motor response
- D. A higher score indicates worse condition
- E. The score helps guide urgency of care

Correct answers: A, B, C, E.

17.** Inspection reveals generalized yellow discoloration of the skin and sclera. Which conclusions are valid?

- A. This finding represents jaundice
- B. Elevated bilirubin should be considered
- C. The finding is always localized
- D. Jaundice may indicate liver disease
- E. Inspection alone is sufficient for diagnosis

Correct answers: A, B, D.

18.** Multiple hemorrhagic skin lesions of varying size are observed. Which statements are correct?

- A. Lesion size helps differentiate petechiae from purpura
- B. These lesions may reflect bleeding disorders
- C. All hemorrhagic lesions are ulcers
- D. Deep bleeding is termed hematoma
- E. Inspection alone defines etiology

Correct answers: A, B, D

19.** A patient presents with bilateral lower-limb edema and periorbital swelling. Which interpretations are appropriate?

- A. The edema is likely systemic
- B. Renal disease should be considered
- C. Local trauma is the most likely cause
- D. Hypoalbuminemia may contribute
- E. Venous obstruction always causes periorbital edema

Correct answers: A, B, D.

20.** A patient with angioedema is evaluated. Which actions are appropriate?

- A. Assessment of airway patency
- B. Immediate reassurance only
- C. Monitoring for progression
- D. Preparedness for urgent intervention
- E. Delaying evaluation

Correct answers: A, C, D.

21.** During general inspection, a clinician notes abnormal posture, facial asymmetry, and weight loss. Which conclusions are appropriate?

- A. Inspection provides valuable diagnostic clues
- B. These findings may suggest chronic or systemic disease
- C. Facial asymmetry is always pathological
- D. Inspection should guide subsequent examination
- E. These findings alone establish a diagnosis

Correct answers: A, B, D.

22.** A student confuses protrusion with retraction during examination. Which statements are correct?

- A. Protrusion indicates anterior movement
- B. Retraction indicates posterior movement
- C. These terms are interchangeable
- D. Correct terminology improves clinical communication
- E. Misuse of terminology may cause diagnostic confusion

Correct answers: A, B, D, E.

23.** A patient with meningitis is observed lying with neck stiffness and avoidance of movement. Which interpretations are valid?

- A. Neck rigidity is a typical sign
- B. Patient positioning may reflect pain or neurological involvement
- C. Observation of posture is clinically relevant
- D. This excludes musculoskeletal causes
- E. Inspection contributes to early recognition

Correct answers: A, B, C, E.

24.** During palpation, the examiner notes inconsistent findings between two examinations. Which factors may explain this?

- A. Examiner technique
- B. Patient cooperation
- C. Subjectivity of palpation
- D. Absolute objectivity of physical examination
- E. Examiner experience

Correct answers: A, B, C, E.

25.** Percussion is performed as part of thoracic examination. Which principles ensure correct interpretation?

- A. Awareness of normal percussion sounds
- B. Correlation with inspection and palpation
- C. Interpretation in isolation
- D. Knowledge of underlying anatomy
- E. Integration into clinical context

Correct answers: A, B, D, E.

26.** A patient with decreased responsiveness is evaluated using the Glasgow Coma Scale. Which statements apply?

- A. The scale provides objective assessment
- B. Repeated assessments are useful
- C. The scale replaces neurological examination
- D. Lower scores indicate more severe impairment
- E. The score guides urgency of management

Correct answers: A, B, D, E.

27.** Generalized pallor and fatigue are observed during inspection. Which interpretations are appropriate?

- A. Pallor may suggest anemia
- B. Fatigue is always a psychological symptom
- C. Systemic disease should be considered
- D. Further evaluation is required
- E. Inspection findings must be contextualized

Correct answers: A, C, D, E.

28.** Multiple bullous skin lesions are identified during examination. Which statements are correct?

- A. Bullae contain serous fluid
- B. Bullae are larger than vesicles
- C. Bullae are always hemorrhagic
- D. Lesion size aids classification
- E. Correlation with history is necessary

Correct answers: A, B, D, E. C.

29.** A patient presents with bilateral edema, ascites, and weight gain. Which mechanisms may contribute?

- A. Increased hydrostatic pressure
- B. Reduced oncotic pressure
- C. Increased capillary permeability
- D. Local trauma
- E. Impaired lymphatic drainage

Correct answers: A, B, C, E.

30.** A clinician suspects venous edema based on examination. Which findings support this diagnosis?

- A. Firm pitting edema
- B. Skin hyperpigmentation
- C. Thickened skin
- D. Sudden facial swelling
- E. Chronic course

Correct answers: A, B, C, E.

31.** During the initial encounter, a clinician carefully observes the patient before starting the examination. Which benefits result from this approach?

- A. Early identification of systemic illness
- B. Orientation of subsequent examination steps
- C. Elimination of the need for history taking
- D. Recognition of abnormal behavior or posture
- E. Improved efficiency of clinical reasoning

Correct answers: A, B, D, E.

32.** A clinician documents findings using precise anatomical terminology. Which advantages does this provide?

- A. Clear communication among healthcare professionals
- B. Reduction of ambiguity in descriptions
- C. Automatic diagnosis
- D. Standardization of clinical language
- E. Improved reproducibility of findings

Correct answers: A, B, D, E.

33.** A patient with severe pain avoids certain movements and maintains a fixed posture. Which interpretations are appropriate?

- A. Pain can influence patient positioning
- B. Posture may reflect underlying pathology
- C. Observation of posture has diagnostic value
- D. Posture changes are always voluntary
- E. Inspection should precede palpation

Correct answers: A, B, C, E.

34.** During palpation, the examiner detects a firm abdominal mass. Which principles should guide interpretation?

- A. Correlation with history and inspection
- B. Awareness of examiner-dependent variability
- C. Immediate diagnostic labeling
- D. Consideration of further examination
- E. Integration with other findings

Correct answers: A, B, D, E.

35.** Percussion is used to further evaluate an abnormal thoracic finding. Which statements are correct?

- A. Percussion complements inspection and palpation
- B. Interpretation depends on knowledge of normal sounds
- C. Percussion findings alone are sufficient for diagnosis
- D. Tissue density influences percussion sounds
- E. Correlation with auscultation improves accuracy

Correct answers: A, B, D, E.

36.** A patient's Glasgow Coma Scale score changes over time. Which conclusions are valid?

- A. Repeated assessments provide useful clinical information
- B. Changes may reflect clinical deterioration or improvement
- C. The scale is unaffected by examiner technique
- D. Trend analysis is important
- E. The score helps guide management decisions

Correct answers: A, B, D, E.

37.** During inspection, diffuse cyanosis and tachypnea are noted. Which interpretations are appropriate?

- A. Cyanosis may indicate hypoxemia
- B. Tachypnea may reflect respiratory compromise
- C. These findings always indicate cardiac disease
- D. Immediate clinical assessment is warranted
- E. Findings should be interpreted together

Correct answers: A, B, D, E.

38.** A clinician differentiates between petechiae and purpura during skin examination. Which criteria are useful?

- A. Size of the lesions
- B. Distribution pattern
- C. Presence of serous fluid
- D. Association with systemic disease
- E. Clinical context

Correct answers: A, B, D, E.

39.** A patient with chronic liver disease develops lower-limb edema and ascites. Which mechanisms contribute?

- A. Portal hypertension
- B. Reduced plasma oncotic pressure
- C. Increased capillary permeability
- D. Local trauma
- E. Sodium and water retention

Correct answers: A, B, E.

40.** A clinician evaluates a patient with suspected angioedema. Which priorities are correct?

- A. Assessment of airway patency
- B. Recognition of potential rapid progression
- C. Delay of intervention until confirmation
- D. Preparedness for emergency management
- E. Continuous monitoring

Correct answers: A, B, D, E.

Assertion-reason questions

All the questions from this paragraph will follow the standard format: A is an assertion, R is a reason. Options: A/B/C/D/E. You have to choose which option represents the correct answer.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

1. **A:** General inspection can provide valuable diagnostic information before physical contact.

R: Posture, facial expression, and body habitus may reflect underlying disease.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A.

2. **A:** Anatomical terminology is essential in clinical semiology.

R: It standardizes descriptions and reduces ambiguity among clinicians

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A

3. **A:** Patients with pleural pain may adopt an antalgic position.

R: Lying on the healthy side can reduce pleural movement and pain.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A

4. **A:** Palpation can be used to assess the consistency of underlying tissues.

R: Palpation allows direct tactile evaluation of tissues and organs.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A

5. **A:** Percussion helps evaluate the density of underlying tissues.

B: Different tissues produce characteristic percussion sounds.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A.

6. **A:** A Glasgow Coma Scale score of 7 indicates severe impairment of consciousness.

R: Lower scores on the scale correspond to more severe neurological dysfunction.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A

7. **A:** Cyanosis is best detected during inspection of skin and mucous membranes.

R: Cyanosis results from reduced oxygen saturation of hemoglobin.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A

8. **A:** Bullae and vesicles are differentiated mainly by their size.

R: Bullae are larger than vesicles and contain serous fluid.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A

9. **A:** Systemic edema often presents bilaterally.

R: Systemic causes affect fluid balance throughout the body.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A.

10. **A:** Angioedema may become a life-threatening condition.
R: Airway involvement can lead to acute respiratory compromise.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A

11. **A:** General inspection should be performed systematically in every patient.

R: Important diagnostic clues may be missed if inspection is omitted.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A

12. **A:** Eversion refers to movement of the sole of the foot away from the median plane.

R: Eversion is a standardized anatomical movement term.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A.

13. **A:** Retraction and protrusion describe opposite movements.

R: Retraction indicates posterior movement, while protrusion indicates anterior movement.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A.

14. **A:** A patient with dyspnea often prefers the sitting position.
R: Sitting may improve diaphragmatic movement and lung expansion.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A.

15. **A:** Deep palpation is useful for evaluating superficial skin temperature.

R: Superficial palpation is more appropriate for assessing skin temperature.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: D.

16. **A:** Tympany is normally heard over the stomach during percussion.

R: Air-filled structures produce tympanic percussion sounds.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A.

17. **A:** Extension in response to painful stimulus is a favorable neurological sign.

R: Extension indicates intact cortical function.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: E.

18. **A:** Pallor of the skin may be associated with anemia.
R: Reduced hemoglobin concentration affects skin coloration.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A.

19. **A:** Petechiae are larger than purpura.
R: Petechiae and purpura are differentiated mainly by size.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: D.

20. **A:** Cardiac edema may progress to generalized edema.
R: Chronic heart failure leads to increased venous hydrostatic pressure.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A.

21. **A:** General inspection contributes to the formulation of initial diagnostic hypotheses.
R: Visual cues such as posture, habitus, and facial expression may suggest specific diseases.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A.

22. **A:** Anatomical terminology allows precise description of clinical findings.

R: Using standardized terms minimizes misunderstanding between clinicians.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A.

23. **A:** Patients with severe pain may restrict movement during examination.

R: Movement can exacerbate pain and discomfort.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A.

24. **A:** Palpation findings may differ between examiners.

R: Examiner technique and experience influence tactile perception.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A.

25. **A:** Percussion sounds vary depending on the underlying tissue.

R: Air-filled, fluid-filled, and solid structures transmit sound differently.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A.

26. **A:** The Glasgow Coma Scale is useful for monitoring changes in consciousness over time.

R: Serial assessments allow detection of neurological deterioration or improvement.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A

27. **A:** Cyanosis may be more evident in mucous membranes than in skin.

R: Mucous membranes are less affected by skin pigmentation.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A.

28. **A:** Ulcers differ from erosions by depth of tissue loss.

R: Ulcers involve deeper tissue layers and may heal with scarring.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A.

29. **A:** Renal disease may cause generalized edema.

R: Protein loss in urine can reduce plasma oncotic pressure.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A.

30. **A:** Angioedema requires prompt clinical evaluation.

R: Rapid progression may compromise the airway.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A.

31. **A:** General inspection should always precede palpation and percussion.

R: Early visual assessment may reveal findings that influence subsequent examination steps.

Correct answer: A.

32. **A:** The muscular plane is superficial to the bone plane.

R: Muscles are located between the skin and the skeletal structures.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A.

33. **A:** Observation of patient posture may provide clues to underlying disease.

R: Certain diseases are associated with characteristic antalgic or compensatory positions.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A.

34. **A:** Palpation can detect variations in tissue consistency.
R: Different tissues and pathological processes alter resistance to pressure.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A.

35. **A:** Dullness on percussion suggests the presence of air-filled tissue.

R: Fluid-filled or solid tissues produce dull percussion sounds.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: D.

36. **A:** A decreasing Glasgow Coma Scale score may indicate neurological deterioration.

R: Lower scores correspond to reduced responsiveness.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A.

37. **A:** Jaundice can be detected during inspection of the sclera.

R: Bilirubin deposition causes yellow discoloration of tissues.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A.

38. **A:** Hematomas represent deep bleeding into tissues.

R: Hematomas may occur in skin, muscle, or joints.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A.

39. **A:** Venous edema is typically associated with skin hyperpigmentation and thickening.

R: Chronic venous stasis leads to tissue changes over time.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A.

40. **A:** Angioedema differs from other forms of edema in its potential for rapid progression.

R: Sudden swelling may compromise the airway and requires urgent attention.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A.

Difficult questions

1.* Which finding during general inspection MOST strongly suggests chronic systemic disease rather than acute illness?

- A. Fever
- B. Cachexia
- C. Tachypnea
- D. Facial flushing
- E. Localized edema

Correct answer: B.

2. Which inspection findings should immediately raise concern for severe underlying pathology?

- A. Marked weight loss
- B. Altered level of alertness
- C. Mild postural asymmetry
- D. Generalized cyanosis
- E. Use of accessory respiratory muscles

Correct answers: A, B, D, E.

3.* Which misuse of anatomical terminology is MOST likely to cause diagnostic misunderstanding?

- A. Using "superior" instead of "cranial"
- B. Confusing protrusion with retraction
- C. Describing a structure as medial
- D. Referring to planes of section
- E. Using standardized movement terms

Correct answer: B.

4. Antalgic postures are BEST explained by which mechanisms?

- A. Pain avoidance
- B. Muscle spasm
- C. Improved oxygenation
- D. Reduction of movement in affected structures
- E. Voluntary exaggeration of symptoms

Correct answers: A, B, D.

5.* Which limitation of palpation MOST affects its diagnostic accuracy?

- A. Examiner subjectivity
- B. Patient positioning
- C. Temperature of the room
- D. Time of day
- E. Lighting conditions

Correct answer: A.

6. Which factors increase the risk of false-negative findings during palpation?

- A. Obesity
- B. Examiner inexperience
- C. Patient guarding
- D. Superficial technique only
- E. Use of deep palpation

Correct answers: A, B, C, D.

7.* Which percussion finding MOST strongly suggests the presence of pleural effusion?

- A. Hyperresonance
- B. Tympany
- C. Resonance
- D. Dullness
- E. Amphoric sound

Correct answer: D.

8. Which errors may lead to incorrect interpretation of percussion findings?

- A. Ignoring body habitus
- B. Lack of knowledge of normal sounds
- C. Failure to correlate with other exam findings
- D. Performing percussion after auscultation
- E. Excessive reliance on a single maneuver

Correct answers: A, B, C, E.

9.* Which Glasgow Coma Scale component is MOST predictive of outcome in severe brain injury?

- A. Eye opening
- B. Verbal response
- C. Motor response
- D. Total score
- E. Pupillary reflex

Correct answer: C.

10. Which features help differentiate venous edema from cardiac edema?

- A. Skin hyperpigmentation
- B. Firm consistency
- C. Predominant lower-limb involvement
- D. Association with heart failure symptoms
- E. Chronic course

Correct answers: A, B, C, E.

11.* Which combination of inspection findings MOST strongly suggests severe acute respiratory compromise?

- A. Cachexia and pallor
- B. Cyanosis and use of accessory muscles
- C. Facial asymmetry and abnormal posture
- D. Localized edema and erythema
- E. Jaundice and pruritus

Correct answer: B.

12. Which findings during inspection should prompt immediate clinical prioritization?

- A. Altered level of consciousness
- B. Severe dyspnea at rest
- C. Mild scoliosis
- D. Generalized cyanosis
- E. Progressive weight gain

Correct answers: A, B, D.

13.* Which anatomical description is MOST precise and least ambiguous?

- A. "The lesion is above the umbilicus"
- B. "The lesion is cranial to the umbilicus"
- C. "The lesion is near the stomach"
- D. "The lesion is on the upper abdomen"
- E. "The lesion is toward the chest"

Correct answer: B.

14. Errors in anatomical terminology are MOST likely to result in:

- A. Miscommunication between clinicians
- B. Incorrect localization of findings
- C. Improved diagnostic accuracy
- D. Inappropriate investigations
- E. Confusion during follow-up

Correct answers: A, B, D, E.

15.* Which posture is MOST characteristic of a patient with severe pleuritic pain?

- A. Supine with knees flexed
- B. Sitting upright, leaning forward
- C. Lateral decubitus on the healthy side
- D. Prone position
- E. Knee-chest position

Correct answer: C.

16. Which factors may LIMIT the usefulness of palpation in obese patients?

- A. Increased thickness of subcutaneous tissue
- B. Reduced tactile sensitivity
- C. Difficulty reaching deep structures
- D. Increased reliability of findings
- E. Patient discomfort

Correct answers: A, B, C, E.

17.* Which percussion sound BEST indicates the presence of free intraperitoneal air?

- A. Dullness
- B. Flatness
- C. Tympany
- D. Resonance
- E. Hyperresonance

Correct answer: C.

18. Which situations may lead to false-positive percussion findings?

- A. Severe muscle tension
- B. Improper finger placement
- C. Examiner fatigue
- D. Correlation with imaging
- E. Misinterpretation of normal variants

Correct answers: A, B, C, E.

19.* In the Glasgow Coma Scale, which change is MOST concerning?

- A. Eye opening from spontaneous to verbal
- B. Verbal response from confused to inappropriate words
- C. Motor response from localizing pain to extension
- D. Total score from 15 to 13
- E. Inability to assess verbal response due to intubation

Correct answer: C.

20. Which features favor renal edema over cardiac edema?

- A. Periorbital swelling
- B. Morning predominance
- C. Associated proteinuria
- D. Severe dyspnea
- E. Generalized distribution

Correct answers: A, B, C, E.

21.* Which inspection finding is MOST suggestive of a chronic systemic disorder rather than an acute condition?

- A. Fever and flushing
- B. Cachexia
- C. Acute cyanosis
- D. Tachypnea
- E. Localized edema

Correct answer: B.

22. Which combinations of inspection findings should prompt urgent reassessment rather than routine examination?

- A. Altered mental status
- B. Use of accessory respiratory muscles
- C. Mild postural scoliosis
- D. Generalized cyanosis
- E. Severe dyspnea at rest

Correct answers: A, B, D, E.

23.* Which statement BEST illustrates correct use of anatomical terminology?

- A. "The pain is near the stomach."
- B. "The lesion is in the upper abdomen."
- C. "The mass is cranial to the umbilicus."
- D. "The discomfort is toward the chest."
- E. "The swelling is above the belly button."

Correct answer: C.

24. Which errors are MOST likely when anatomical terminology is used imprecisely?

- A. Mislocalization of lesions
- B. Inappropriate diagnostic testing
- C. Improved interdisciplinary communication
- D. Confusion during follow-up
- E. Incorrect surgical planning

Correct answers: A, B, D, E.

25.* Which patient posture MOST strongly suggests pleural involvement?

- A. Supine with knees flexed
- B. Sitting upright leaning forward
- C. Lateral decubitus on the healthy side
- D. Prone position
- E. Knee-chest position

Correct answer: C.

26. Which factors MOST reduce the sensitivity of palpation during physical examination?

- A. Examiner inexperience
- B. Obesity
- C. Patient voluntary guarding
- D. Adequate patient relaxation
- E. Inadequate examination technique

Correct answers: A, B, C, E.

27.* Which percussion finding is MOST consistent with a large pleural effusion?

- A. Tympany
- B. Hyperresonance
- C. Dullness
- D. Normal resonance
- E. Amphoric sound

Correct answer: C.

28. Which situations may result in misleading percussion findings?

- A. Severe obesity
- B. Improper finger placement
- C. Failure to compare symmetrical areas
- D. Integration with auscultation
- E. Examiner fatigue

Correct answers: A, B, C, E.

29.* Which Glasgow Coma Scale change indicates the MOST serious neurological deterioration?

- A. Eye opening decreases from spontaneous to verbal
- B. Verbal response decreases from confused to inappropriate words
- C. Motor response decreases from withdrawal to extension
- D. Total score decreases from 15 to 14
- E. Verbal response cannot be assessed due to intubation

Correct answer: C.

30. Which clinical features favor **renal edema** over **cardiac edema**?

- A. Periorbital predominance
- B. Morning worsening
- C. Associated proteinuria
- D. Severe exertional dyspnea
- E. Generalized distribution

Correct answers: A, B, C, E.

31.* Which single inspection finding MOST strongly suggests a life-threatening condition requiring immediate intervention?

- A. Mild pallor
- B. Cachexia
- C. Generalized cyanosis
- D. Localized edema
- E. Facial asymmetry

Correct answer: C.

32. Which inspection findings should immediately shift the examiner's priority from routine examination to urgent assessment?

- A. Altered consciousness
- B. Use of accessory respiratory muscles
- C. Obesity
- D. Central cyanosis
- E. Abnormal gait

Correct answers: A, B, D.

33.* Which anatomical description is MOST appropriate in a medical record?

- A. "Pain near the liver"
- B. "Pain in the right upper abdomen"
- C. "Pain cranial to the umbilicus in the right hypochondrium"
- D. "Pain above the belly button"
- E. "Pain toward the chest"

Correct answer: C.

34. Failure to use standardized anatomical terminology may lead to:

- A. Misinterpretation of findings
- B. Inaccurate follow-up comparisons
- C. Improved communication
- D. Diagnostic errors
- E. Incorrect clinical decisions

Correct answers: A, B, D, E.

35.* Which posture MOST strongly suggests pleural involvement rather than cardiac or abdominal pathology?

- A. Supine position
- B. Sitting upright leaning forward
- C. Lateral decubitus on the healthy side
- D. Knee-chest position
- E. Prone position

Correct answer: C.

36. Which factors MOST significantly reduce the diagnostic reliability of palpation?

- A. Examiner inexperience
- B. Patient anxiety or guarding
- C. Excessive subcutaneous tissue
- D. Proper patient positioning
- E. Poor examination technique

Correct answers: A, B, C, E.

37.* Which percussion finding is MOST consistent with extensive pleural effusion?

- A. Tympany
- B. Hyperresonance
- C. Flatness / marked dullness
- D. Normal resonance
- E. Amphoric sound

Correct answer: C.

38. Which errors are MOST likely to cause false interpretation of percussion findings?

- A. Failure to compare symmetrical areas
- B. Lack of familiarity with normal sounds
- C. Correlation with inspection and palpation
- D. Examiner fatigue
- E. Overreliance on a single finding

Correct answers: A, B, D, E.

39.* In the Glasgow Coma Scale, deterioration of which component is MOST alarming prognostically?

- A. Eye opening
- B. Verbal response
- C. Motor response
- D. Total score from 15 to 13
- E. Inability to assess verbal response

Correct answer: C.

40. Which features BEST distinguish **renal edema** from **cardiac edema**?

- A. Periorbital predominance
- B. Morning accentuation
- C. Associated proteinuria
- D. Severe exertional dyspnea
- E. Generalized distribution

Correct answers: A, B, C, E.

Chapter III. Taking history and symptoms in patient with respiratory disease

Cristian Andrei Sarau, Ciprian Ilie Rosca

Mixed questions

1. A patient with respiratory pathology reports progressive weight loss and profound fatigue. Which condition is most consistent with this systemic symptom profile?
 - Asthma exacerbation
 - Viral upper respiratory infection
 - End-stage COPD
 - Acute bronchitis
 - Allergic rhinitis

Correct answer: C

2. A 47-year-old patient complains of chest pain that radiates to the left shoulder and neck. During history taking, which respiratory-related symptom question is *most appropriate* to clarify radiation?
 - "How severe is the pain on a scale of 1 to 10?"
 - "Where is the pain located?"
 - "Does the chest pain spread anywhere else?"
 - "What makes the pain worse?"
 - "When did the pain begin?"

Correct answer: C

3. A patient with suspected pneumonia reports fever, chills, and productive cough with purulent sputum. Which category do these symptoms belong to?
 - Systemic symptoms
 - Local respiratory signs
 - Mechanical symptoms
 - Musculoskeletal symptoms
 - Cardiovascular symptoms

Correct answer: A

4. Which question best assesses the *character* of shortness of breath during history taking?

- A. "Does the pain go to any other area?"
- B. "Is the shortness of breath constant or does it come and go?"
- C. "When did your symptoms first appear?"
- D. "What improves your breathing?"
- E. "Where is the discomfort located?"

Correct answer: B

5. A patient reports that cold air makes their chest pain worse, but resting improves it. These details are part of which aspect of symptom analysis?

- A. Associated symptoms
- B. Timing
- C. Character
- D. Exacerbating/relieving factors
- E. Radiation

Correct answer: D

6. Which element of symptom analysis focuses on identifying the **exact anatomical location** of a complaint?

- A. Onset
- B. Character
- C. Site
- D. Severity
- E. Evolution

Correct answer: C.

7. Sudden onset of dyspnea is MOST characteristic of:

- A. Pulmonary fibrosis
- B. Chronic bronchitis
- C. Pneumothorax
- D. Lung cancer
- E. Bronchial asthma (chronic form)

Correct answer: C.

8. Which question BEST assesses the **severity** of dyspnea?

- A. "Does the symptom radiate?"
- B. "Is it constant or intermittent?"
- C. "How does it limit your daily activities?"
- D. "What triggered the symptom?"
- E. "Where do you feel it?"

Correct answer: C.

9. Dyspnea that worsens during physical exertion and improves with rest is MOST suggestive of:

- A. Psychogenic dyspnea
- B. Functional dyspnea
- C. Organic dyspnea
- D. Upper airway obstruction
- E. Vocal cord dysfunction

Correct answer: C.

10. Radiation of chest pain to the left arm and mandible is MOST typical of:

- A. Pleurisy
- B. Pulmonary embolism
- C. Coronary ischemia
- D. Costochondritis
- E. Pneumonia

Correct answer: C.

11. Which associated symptom MOST strongly suggests an infectious respiratory disease?

- A. Weight loss
- B. Night sweats
- C. Fever
- D. Anxiety
- E. Hoarseness

Correct answer: C.

12. A metallic cough is MOST often described as:

- A. Barking in nature
- B. High-pitched inspiratory sound
- C. Resonating like sound in a tin can
- D. Productive with frothy sputum
- E. Silent and ineffective

Correct answer: C.

13. Which cough characteristic suggests **pertussis**?

- A. Dry cough worsened by cold air
- B. Productive cough with purulent sputum
- C. Paroxysmal cough with inspiratory "whoop"
- D. Metallic cough
- E. Cough associated with hemoptysis

Correct answer: C.

14. Expectoration of a large quantity of purulent sputum after a coughing effort is called:

- A. Hemoptysis
- B. Vomiting
- C. Vomica
- D. Regurgitation
- E. Aspiration

Correct answer: C.

15. Which feature helps differentiate **hemoptysis** from **hematemesis**?

- A. Presence of nausea
- B. Acidic taste
- C. Blood originating below the larynx
- D. Dark-colored blood
- E. Association with melena

Correct answer: C.

16. Which symptom attribute helps distinguish localized chest pain from diffuse discomfort?

- A. Severity
- B. Evolution
- C. Site
- D. Associated symptoms
- E. Timing

Correct answer: C.

17. Dyspnea that appears **suddenly at rest** is MOST suggestive of:

- A. Chronic obstructive pulmonary disease
- B. Pulmonary fibrosis
- C. Pulmonary embolism
- D. Lung cancer
- E. Chronic bronchitis

Correct answer: C.

18. Which element of dyspnea assessment evaluates the **impact on daily life**?

- A. Character
- B. Severity
- C. Radiation
- D. Site
- E. Onset

Correct answer: B.

19. Dyspnea that occurs predominantly in anxious patients without organic disease is termed:

- A. Obstructive dyspnea
- B. Restrictive dyspnea
- C. Psychogenic dyspnea
- D. Cardiac dyspnea
- E. Inspiratory dyspnea

Correct answer: C.

20. Chest pain that increases with deep inspiration and coughing is MOST characteristic of:

- A. Myocardial ischemia
- B. Aortic dissection
- C. Pleuritic pain
- D. Gastroesophageal reflux
- E. Musculoskeletal pain

Correct answer: C.

21. Which associated symptom MOST strongly supports a diagnosis of pulmonary tuberculosis?

- A. Acute fever for 24 hours
- B. Weight loss and night sweats
- C. Rhinorrhea
- D. Episodic wheezing
- E. Hoarseness

Correct answer: B.

22. Which cough characteristic is MOST typical of chronic bronchitis?

- A. Dry, irritative cough
- B. Paroxysmal cough with whoop
- C. Productive cough with sputum
- D. Metallic cough
- E. Nocturnal cough only

Correct answer: C.

23. Which sputum description is MOST consistent with **serous sputum**?

- A. Thick, yellow-green, opaque
- B. Frothy and blood-tinged
- C. Clear, watery, like spring water
- D. Containing tissue fragments
- E. Dark and foul-smelling

Correct answer: C.

24. Which finding BEST confirms that expectorated blood represents **hemoptysis**?

- A. Blood mixed with food particles
- B. Blood preceded by nausea
- C. Blood originating below the larynx
- D. Acidic taste
- E. Presence of melena

Correct answer: C.

25. Chest pain caused by **musculoskeletal disorders** is MOST often:

- A. Crushing in nature
- B. Radiating to the left arm
- C. Reproduced by palpation
- D. Associated with dyspnea
- E. Relieved by nitrates

Correct answer: C.

26. Which symptom attribute helps the clinician distinguish **localized pleuritic pain** from diffuse thoracic discomfort?

- A. Severity
- B. Onset
- C. Site
- D. Evolution
- E. Associated symptoms

Correct answer: C.

27. Dyspnea that appears **suddenly and at rest** should FIRST raise suspicion of:

- A. Chronic bronchitis
- B. Pulmonary fibrosis
- C. Pulmonary embolism
- D. Lung cancer
- E. Bronchial asthma

Correct answer: C.

28. Which question BEST evaluates the **severity** of dyspnea?

- A. "Where do you feel the discomfort?"
- B. "When did it start?"
- C. "How far can you walk before you have to stop?"
- D. "Does it radiate anywhere?"
- E. "Is it associated with cough?"

Correct answer: C.

29. Dyspnea that improves with reassurance and calm breathing is MOST consistent with:

- A. Obstructive dyspnea
- B. Restrictive dyspnea
- C. Psychogenic dyspnea
- D. Cardiac dyspnea
- E. Mixed dyspnea

Correct answer: C.

30. Chest pain that radiates to the left arm and mandible is MOST suggestive of:

- A. Pleurisy
- B. Pulmonary embolism
- C. Coronary ischemia
- D. Costochondritis
- E. Pneumonia

Correct answer: C.

31. Which associated symptom MOST strongly suggests a **chronic malignant process**?

- A. Acute fever
- B. Weight loss
- C. Sneezing
- D. Nasal congestion
- E. Acute cough

Correct answer: B.

32. A cough described as "echoing like sound in a tin can" is known as:

- A. Barking cough
- B. Paroxysmal cough
- C. Metallic cough
- D. Dry cough
- E. Cardiac cough

Correct answer: C.

33. Which cough type is MOST typical of **chronic bronchitis**?

- A. Dry cough only at night
- B. Paroxysmal cough with whoop
- C. Productive cough with sputum
- D. Metallic cough
- E. Reflex cough only

Correct answer: C.

34. Which sputum characteristic suggests a **purulent inflammatory process**?

- A. Clear and watery
- B. Frothy and white
- C. Yellow-green and opaque
- D. Blood-streaked only
- E. Scant and transparent

Correct answer: C.

35. Chest pain that is **reproduced by palpation** MOST strongly indicates:

- A. Myocardial ischemia
- B. Pulmonary embolism
- C. Musculoskeletal origin
- D. Pleurisy
- E. Aortic dissection

Correct answer: C.

36. Which feature BEST differentiates **acute dyspnea** from chronic dyspnea during history taking?

- A. Severity
- B. Impact on daily activities
- C. Mode of onset
- D. Associated cough
- E. Radiation

Correct answer: C.

37. Dyspnea associated with a **loss of lung elasticity** is MOST characteristic of:

- A. Upper airway obstruction
- B. Pulmonary emphysema
- C. Psychogenic dyspnea
- D. Pleural effusion
- E. Neuromuscular disease

Correct answer: B.

38. Which symptom is MOST helpful in distinguishing **cardiac dyspnea** from primary pulmonary dyspnea?

- A. Wheezing
- B. Orthopnea
- C. Dry cough
- D. Fever
- E. Chest tightness

Correct answer: B.

39. The expectoration of a very large amount of sputum (>300 mL) in a short time interval is called:

- A. Hemoptysis
- B. Regurgitation
- C. Vomica
- D. Aspiration
- E. Hematemesis

Correct answer: C.

40. Chest pain that is **sharp, localized, and worsens with deep inspiration** is MOST consistent with:

- A. Coronary ischemia
- B. Aortic dissection
- C. Pleuritic pain
- D. Gastroesophageal reflux
- E. Musculoskeletal pain

Correct answer: C.

Progressive Questions

1. When assessing the *site* of a respiratory symptom, which questions are appropriate to ask? (Select all that apply.)

- A. "Where is the pain?"
- B. "Can you point to where you feel the symptom?"
- C. "What makes the symptom worse?"
- D. "Does the pain spread anywhere else?"
- E. "How long have you had the symptom?"

Correct answers: A, B.

2. Which questions properly assess the *onset* of shortness of breath? (Select all that apply.)

- A. "How and when did the symptom start?"
- B. "Is the shortness of breath constant or intermittent?"
- C. "Did the shortness of breath appear suddenly?"
- D. "Where exactly is the discomfort?"
- E. "What improves the shortness of breath?"

Correct answers: A, C.

3. Which of the following are valid questions about the *character* of a respiratory symptom? (Select all that apply.)

- A. "Can you describe the specific characteristics of the symptom?"
- B. "Is the shortness of breath constant or does it come and go?"
- C. "Has the symptom changed over time?"
- D. "Does the chest pain spread elsewhere?"
- E. "Does cold air worsen your symptoms?"

Correct answers: A, B.

4. Which questions evaluate the *radiation* of chest pain? (Select all that apply.)

- A. "Does the chest pain spread elsewhere?"
- B. "Where is the pain located?"
- C. "Do you feel the pain in your back, arm, or jaw?"
- D. "Is the symptom relieved by rest?"
- E. "What other symptoms accompany it?"

Correct answers: A, C.

5. Which examples correctly assess *associated symptoms* in respiratory disease? (Select all that apply.)

- A. Asking about fever in suspected pneumonia
- B. Asking about hemoptysis in suspected pulmonary embolism
- C. Asking whether cold air worsens symptoms
- D. Asking about weight loss in lung cancer
- E. Asking whether shortness of breath changes over time

Correct answers: A, B, D.

6. Which are types of bradypnea?

- A. Two
- B. Inspiratory type
- C. With polypnea
- D. Mixed type
- E. Expiratory type

Correct answers: B, E

7. Dyspnea:

- A. Is pathognomonic for a particular disease.
- B. Can occur in pulmonary, cardiac, musculoskeletal diseases.
- C. Anxious patients may have episodes of dyspnea.
- D. In polypnea there is a respiratory rate >18/min.
- E. In bradypnea corage and tirage may occur.

Correct answers: B, C, D, E

8. The following statements are true about dyspnea:

- A. In inspiratory dyspnea the obstruction is in the upper airways.
- B. In expiratory dyspnea the obstruction is in the upper airways.
- C. In expiratory dyspnea there is a loss of lung elasticity in pulmonary emphysema, pulmonary fibrosis.
- D. Mixed dyspnea is frequently associated with tachypnea.
- E. Acute dyspnea is rarely seen in pneumothorax.

Correct answers: A, C, D.

9. In the chronic dyspnea evaluation scale:

- A. Grade 2 appears on climbing < 2 floors or walking on plan ground < 200m.
- B. Grade 1 appears on climbing < 2 floors or walking on a plan ground < 200m.
- C. Grade 3 appears at rest.
- D. Grade 2 appears during daily activities (dressed, eating, walking around the house)
- E. Grade 4 appears at rest.

Correct answers: A, E.

10. Coughing is:

- A. A reflex or voluntary act
- B. Is not a common symptom
- C. Significant epidemiological impact, through Flügge drops
- D. Is not very important
- E. Is important in indicating the diagnosis

Correct answers: A, C, E.

11. Cough can be:

- A. Dry cough
- B. Acute <3 weeks
- C. Acute >3 weeks
- D. Dry cough cannot be of cardiac cause
- E. Can occur in the presence of dry air

Correct answers: A, B, E.

12. Metallic cough

- A. Occurs in pertussis
- B. Like a sound echoing in a tin can
- C. Occurs when the sound waves generated in the tracheobronchial tree resonate in a large, rigid, air-filled cavity
- D. Has two distinct tones caused by asymmetric involvement of the vocal cords
- E. Appears in extrinsic compression of a vocal cord

Correct answers: B, C.

13. Choose the true statements:

- A. Hernias result from a sustained increase in intra-abdominal and pelvic pressure
- B. The cough causes a sudden and forceful distension of the cervical region, resulting in a mechanical "massage" or stimulation of the carotid sinus
- C. Vomiting does not occur in repeated coughing.
- D. Sputum cannot contain tissue fragments
- E. The moderate amount of sputum is approximately 300ml/24h

Correct answers: A, B.

14. Sputum can be:

- A. Serous containing streaks of blood
- B. Serous as clear spring water
- C. Mucous occurs in acute and chronic bronchitis and bronchial asthma
- D. Muco-purulent is yellowish-green color, opaque, not transparent
- E. Fibrinous results from the drainage of a purulent collection into the bronchial tree

Correct answers: B, C, D.

15. Vomica:

- A. Represents >300ml of sputum
- B. Is preceded by dyspnea
- C. Can be eliminated only in a single massive episode.
- D. May occur after intense exertion.
- E. The expectoration cannot occur abruptly and explosively

Correct answers: A, B, D.

16. Hemoptysis:

- A. The bleeding occurs below the larynx.
- B. The source can be rupture or ulceration of a blood vessel.
- C. Vomiting of blood originating from the upper digestive tract.
- D. Elimination of blood originating from the nasopharynx
- E. Can be confirmed by gastroscopy.

Correct answers: A, B.

17. Chest pain can be caused by:

- A. Stomach diseases.
- B. Pulmonary metastases from other cancers.
- C. Pleurisy.
- D. Spleen diseases.
- E. Head diseases

Correct answers: A, B, C, D.

18. Characteristics of chest pain:

- A. Burning pain may occur in pleurisy.
- B. In aortic dissection it may be sharp.
- C. In coronary ischemia it may be crushing.
- D. Musculoskeletal pain may be reproduced by palpation.
- E. Cardiac pain radiates to the mandible.

Correct answers: C, D, E.

19. Which questions are appropriate for assessing the **site** of a respiratory symptom?

- A. "Where is the pain?"
- B. "Can you point to where you feel it?"
- C. "What makes the symptom worse?"
- D. "Does the pain spread anywhere else?"
- E. "How long have you had the symptom?"

Correct answers: A, B.

20. Which questions properly assess the **onset** of dyspnea?

- A. "How and when did the symptom start?"
- B. "Is the dyspnea constant or intermittent?"
- C. "Did the dyspnea appear suddenly?"
- D. "Where exactly is the discomfort?"
- E. "What improves the dyspnea?"

Correct answers: A, C.

21. Which questions evaluate the **character** of dyspnea?

- A. "Can you describe the sensation?"
- B. "Is the shortness of breath constant or episodic?"
- C. "Has the symptom changed over time?"
- D. "Does the pain radiate?"
- E. "What triggers the symptom?"

Correct answers: A, B.

22. Which questions assess the **severity** of dyspnea?

- A. "How far can you walk before stopping?"
- B. "Does the symptom radiate?"
- C. "Can you perform daily activities?"
- D. "Is the dyspnea present at rest?"
- E. "Where is the symptom located?"

Correct answers: A, C, D.

23. Which questions are appropriate for evaluating **radiation of chest pain**?

- A. "Does the pain spread anywhere?"
- B. "Do you feel pain in the arm, jaw, or back?"
- C. "What is the intensity of the pain?"
- D. "Is the pain relieved by rest?"
- E. "Is the pain burning or stabbing?"

Correct answers: A, B.

24. Which are considered **associated symptoms** in respiratory disease?

- A. Fever in pneumonia
- B. Weight loss in lung cancer
- C. Wheezing during exertion
- D. Hemoptysis in pulmonary embolism
- E. Pain worsened by cold air

Correct answers: A, B, D.

25. Which statements about **dyspnea** are correct?

- A. It may occur in pulmonary diseases
- B. It may occur in cardiac diseases
- C. It is always caused by airway obstruction
- D. Anxiety may provoke dyspnea
- E. It is pathognomonic for a single disease

Correct answers: A, B, D.

26. Which features characterize **inspiratory dyspnea**?

- A. Upper airway obstruction
- B. Prolonged expiration
- C. Use of accessory inspiratory muscles
- D. Noisy inspiration
- E. Loss of lung elasticity

Correct answers: A, C, D.

27. Which statements about cough are true?

- A. It may be voluntary or reflex
- B. It has epidemiological importance
- C. It is irrelevant in diagnosis
- D. It may indicate underlying disease
- E. It never produces complications

Correct answers: A, B, D.

28. Which statements regarding sputum are correct?

- A. Purulent sputum is yellow-green and opaque
- B. Serous sputum resembles clear spring water
- C. Sputum cannot contain tissue fragments
- D. Sputum quantity has diagnostic value
- E. All sputum indicates infection

Correct answers: A, B, D.

29. Which statements regarding polypnea and bradypnea are correct?

- A. Polypnea is defined by an increased respiratory rate
- B. Bradypnea may be associated with tirage
- C. Polypnea can occur in anxiety
- D. Bradypnea is pathognomonic for a specific disease
- E. Polypnea excludes dyspnea

Correct answers: A, B, C.

30. Which statements about expiratory dyspnea are correct?

- A. It is typically associated with upper airway obstruction
- B. It may occur in pulmonary emphysema
- C. It involves prolonged expiration
- D. It is related to loss of lung elasticity
- E. It is characteristic only of acute diseases

Correct answers: B, C, D.

31. Which statements correctly describe mixed dyspnea?

- A. It includes both inspiratory and expiratory difficulty
- B. It is frequently associated with tachypnea
- C. It occurs only in chronic conditions
- D. It may appear in severe pulmonary disease
- E. It excludes cardiac pathology

Correct answers: A, B, D.

32. Which statements are correct regarding the chronic dyspnea evaluation scale?

- A. Grade 1 dyspnea appears only during intense physical effort
- B. Grade 2 dyspnea limits walking on level ground
- C. Grade 3 dyspnea occurs during daily activities
- D. Grade 4 dyspnea is present at rest
- E. Grade 2 dyspnea appears at rest

Correct answers: A, B, C, D.

33. Which statements about cough are correct?

- A. Cough may be voluntary or reflex
- B. Repeated coughing may induce vomiting
- C. Cough has no epidemiological relevance
- D. Cough may produce complications
- E. Cough is irrelevant for diagnosis

Correct answers: A, B, D.

34. Which statements correctly describe a metallic cough?

- A. It sounds like echoing in a tin can
- B. It occurs when sound resonates in a rigid air-filled cavity
- C. It is typical for pertussis
- D. It may occur in large pulmonary cavities
- E. It is caused by asymmetric vocal cord paralysis

Correct answers: A, B, D.

35. Which statements about vomica are correct?

- A. It represents expectoration of a large quantity of sputum
- B. It may occur abruptly and explosively
- C. It is always eliminated in multiple small episodes
- D. It may be preceded by dyspnea
- E. It cannot occur after physical effort

Correct answers: A, B, D.

36. Which statements regarding hemoptysis are correct?

- A. Blood originates below the larynx
- B. It may result from rupture of a blood vessel
- C. It is identical to hematemesis
- D. It can originate from the nasopharynx
- E. It can be confirmed by gastroscopy

Correct answers: A, B.

37. Which diseases may cause chest pain of respiratory or extrathoracic origin?

- A. Pleurisy
- B. Pulmonary metastases
- C. Gastric disease
- D. Splenic disease
- E. Head pathology

Correct answers: A, B, C, D.

38. Which statements regarding chest pain characteristics are correct?

- A. Ischemic cardiac pain may be crushing
- B. Musculoskeletal pain may be reproduced by palpation
- C. Cardiac pain never radiates
- D. Burning pain is typical for pleurisy
- E. Cardiac pain may radiate to the mandible

Correct answers: A, B, E.

39. Which statements regarding **dyspnea** are correct?

- A. Dyspnea may occur in pulmonary disease
- B. Dyspnea may occur in cardiac disease
- C. Dyspnea is always associated with airway obstruction
- D. Anxiety may precipitate dyspnea
- E. Dyspnea is pathognomonic for a single disease

Correct answers: A, B, D.

40. Which statements correctly describe the epidemiological importance of cough?

- A. It contributes to disease transmission via respiratory droplets
- B. It has no role in spreading infection
- C. It may disseminate pathogens in the community
- D. It is clinically irrelevant
- E. It occurs only in infectious diseases

Correct answers: A, C.

Advanced clinical vignettes

1.** A 62-year-old man presents with progressive shortness of breath over several years, worsened by exertion and relieved by rest. He denies sudden onset.

Which features support a diagnosis of chronic dyspnea?

- A. Gradual onset
- B. Long duration
- C. Presence at rest from the beginning
- D. Association with daily activity limitation
- E. Sudden appearance during rest

Correct answers: A, B, D.

2.** A patient presents with acute dyspnea that appeared suddenly while resting.

Which diagnoses should be considered FIRST based on history alone?

- A. Pulmonary embolism
- B. Pneumothorax
- C. Chronic bronchitis
- D. Pulmonary fibrosis
- E. Lung cancer

Correct answers: A, B.

3.** A 48-year-old woman reports chest pain that worsens with deep inspiration and coughing and does not radiate.

Which historical features support **pleuritic chest pain?**

- A. Sharp pain
- B. Exacerbation with respiration
- C. Radiation to the mandible
- D. Relief with rest only
- E. Localized pain

Correct answers: A, B, E.

4.** A patient reports dyspnea characterized by difficulty predominantly during expiration, prolonged expiration, and wheezing.

Which mechanisms are MOST consistent with this presentation?

- A. Upper airway obstruction
- B. Loss of lung elasticity
- C. Bronchial obstruction
- D. Pulmonary emphysema
- E. Inspiratory muscle weakness

Correct answers: B, C, D.

5.** A patient with chronic cough reports repeated coughing spells followed by vomiting.

Which statements regarding cough complications are correct?

- A. Vomiting may follow repeated coughing
- B. Cough is clinically irrelevant
- C. Increased intrathoracic pressure may cause complications
- D. Cough has no epidemiological impact
- E. Cough may provoke hernias

Correct answers: A, C, E.

6.** A patient describes a cough that "sounds like echoing in a tin can." Imaging later reveals a large pulmonary cavity.

Which statements explain this cough type?

- A. It is called metallic cough
- B. It results from sound resonance in a rigid cavity
- C. It is typical of pertussis
- D. It may occur in large air-filled cavities
- E. It is due to vocal cord paralysis

Correct answers: A, B, D.

7.** A patient suddenly expectorates a very large quantity of purulent sputum after intense coughing, preceded by dyspnea.

Which statements support the diagnosis of vomica?

- A. Sudden elimination of large sputum volume
- B. Gradual elimination over days
- C. Possible preceding dyspnea
- D. Always associated with hemoptysis
- E. May occur after exertion

Correct answers: A, C, E.

8.** A patient presents with coughing up blood. Which historical features help confirm hemoptysis rather than hematemesis?

- A. Blood originates below the larynx
- B. Absence of nausea
- C. Acidic taste of blood
- D. Blood mixed with sputum
- E. Association with melena

Correct answers: A, B, D.

9.** A patient complains of chest pain radiating to the left arm and mandible, associated with exertion.

Which characteristics suggest cardiac ischemic pain rather than respiratory pain?

- A. Crushing quality
- B. Radiation to mandible
- C. Reproduction by palpation
- D. Relation to physical effort
- E. Worsening with deep inspiration

Correct answers: A, B, D.

10.** A patient with suspected lung cancer reports weight loss, night sweats, and fatigue.

Which of these are considered systemic associated symptoms?

- A. Weight loss
- B. Night sweats
- C. Chest pain
- D. Fatigue
- E. Wheezing

Correct answers: A, B, D.

11.** A 70-year-old patient reports dyspnea that has slowly worsened over several years and now limits daily activities. Which historical elements support a diagnosis of **chronic dyspnea**?

- A. Long duration
- B. Gradual onset
- C. Sudden appearance at rest
- D. Progressive limitation of activity
- E. Complete absence of exertional symptoms

Correct answers: A, B, D.

12.** A patient presents with dyspnea predominantly during expiration, prolonged expiration, and wheezing.

Which mechanisms are MOST likely involved?

- A. Upper airway obstruction
- B. Loss of lung elasticity
- C. Bronchial obstruction
- D. Inspiratory muscle paralysis
- E. Restrictive lung disease

Correct answers: B, C.

13.** A patient reports dyspnea occurring both during inspiration and expiration, accompanied by tachypnea.

Which features define **mixed dyspnea**?

- A. Difficulty in both respiratory phases
- B. Association with increased respiratory rate
- C. Occurs exclusively in cardiac disease
- D. Suggests severe respiratory pathology
- E. Absence of airway involvement

Correct answers: A, B, D.

14.** A patient presents with sudden-onset dyspnea and pleuritic chest pain.

Which diagnoses should be considered FIRST based on history?

- A. Pulmonary embolism
- B. Pneumothorax
- C. Chronic bronchitis
- D. Pulmonary fibrosis
- E. Lung cancer

Correct answers: A, B.

15.** A patient complains of chest pain that worsens with deep breathing and coughing, without radiation.

Which characteristics support a diagnosis of **pleuritic chest pain**?

- A. Sharp quality
- B. Exacerbation with respiration
- C. Crushing sensation
- D. Localized pain
- E. Radiation to mandible

Correct answers: A, B, D.

16.** A patient with chronic cough reports repeated coughing spells that sometimes induce vomiting.

Which statements regarding cough complications are correct?

- A. Vomiting may follow repeated coughing
- B. Increased intrathoracic pressure may cause hernias
- C. Cough has no epidemiological relevance
- D. Cough may produce syncope
- E. Cough never causes complications

Correct answers: A, B, D.

17.** A patient describes a cough "echoing like a sound in a tin can." Imaging reveals a large pulmonary cavity.

Which statements explain this cough type?

- A. It is termed metallic cough
- B. It occurs due to sound resonance in a rigid cavity
- C. It is characteristic of pertussis
- D. It may occur in cavitary lung disease
- E. It results from vocal cord paralysis

Correct answers: A, B, D.

18.** A patient expectorates a very large amount of purulent sputum abruptly, preceded by dyspnea.

Which features support the diagnosis of **vomica**?

- A. Sudden expectoration
- B. Large volume of sputum
- C. Gradual elimination over several days
- D. Possible preceding dyspnea
- E. Always associated with hemoptysis

Correct answers: A, B, D.

19.** A patient presents with coughing up blood.

Which historical features help confirm **hemoptysis** rather than hematemesis?

- A. Blood originates below the larynx
- B. Absence of nausea
- C. Blood mixed with sputum
- D. Acidic taste of blood
- E. Presence of melena

Correct answers: A, B, C.

20.** A patient reports chest pain reproduced by palpation and worsened by movement.

Which features suggest a **musculoskeletal origin?**

- A. Reproduction by palpation
- B. Relation to movement
- C. Radiation to mandible
- D. Crushing quality
- E. Association with exertion only

Correct answers: A, B.

21.** A 55-year-old patient reports dyspnea that appears only during physical exertion and disappears at rest.

Which historical elements support an **early-stage chronic dyspnea?**

- A. Exertional onset
- B. Absence of dyspnea at rest
- C. Sudden nocturnal episodes
- D. Gradual progression
- E. Acute onset at rest

Correct answers: A, B, D.

22.** A patient presents with dyspnea associated with prolonged expiration and wheezing.

Which additional historical findings would further support an **obstructive mechanism?**

- A. History of smoking
- B. Improvement after bronchodilators
- C. Inspiratory stridor
- D. Loss of lung elasticity
- E. Restrictive ventilatory pattern

Correct answers: A, B, D.

23.** A patient reports dyspnea involving both inspiratory and expiratory phases, accompanied by tachypnea.

Which conclusions are justified based on history alone?

- A. Dyspnea is mixed
- B. Disease severity may be significant
- C. It excludes cardiac pathology
- D. Tachypnea often accompanies mixed dyspnea
- E. It is always acute

Correct answers: A, B, D.

24.** A patient describes chest pain that is sharp, localized, and worsens with deep breathing, without radiation.

Which historical features are MOST consistent with **pleuritic pain**?

- A. Sharp quality
- B. Exacerbation with respiration
- C. Radiation to left arm
- D. Localization to one hemithorax
- E. Relief with nitrates

Correct answers: A, B, D.

25.** A patient reports chronic cough with repeated paroxysms, sometimes followed by vomiting.

Which consequences of cough are supported by history?

- A. Vomiting after coughing
- B. Increased intra-abdominal pressure
- C. Carotid sinus stimulation
- D. Absence of complications
- E. Possible hernia formation

Correct answers: A, B, C, E.

26.** A patient describes a cough with a metallic, echoing sound.

Which historical clues suggest an underlying **cavitary pulmonary lesion**?

- A. Metallic quality of cough
- B. Resonant character of the sound
- C. Occurrence during sleep only
- D. Association with large air-filled cavities
- E. Absence of sputum

Correct answers: A, B, D.

27.** A patient suddenly expectorates a very large amount of purulent sputum, preceded by dyspnea.

Which historical elements define **vomica**?

- A. Abrupt expectoration
- B. Large volume of sputum
- C. Gradual elimination over days
- D. Possible preceding dyspnea
- E. Always associated with hemoptysis

Correct answers: A, B, D.

28.** A patient presents with coughing up blood mixed with sputum, without nausea or vomiting.

Which features confirm **hemoptysis**?

- A. Blood originates below the larynx
- B. Blood mixed with sputum
- C. Absence of digestive symptoms
- D. Acidic taste
- E. Presence of melena

Correct answers: A, B, C.

29.** A patient reports chest pain associated with exertion and radiating to the left arm and mandible.

Which historical characteristics support **ischemic cardiac pain**?

- A. Crushing quality
- B. Radiation pattern
- C. Reproduction by palpation
- D. Relation to effort
- E. Worsening with deep inspiration

Correct answers: A, B, D.

30.** A patient complains of chest pain reproduced by palpation and aggravated by movement.

Which historical features do not support a **musculoskeletal origin**?

- A. Reproduction by palpation
- B. Relation to movement
- C. Sharp inspiratory pain
- D. Radiation to mandible
- E. Relief with nitrates

Correct answers: C, D, E.

31.** A patient reports dyspnea that initially appeared only during intense exertion but has gradually progressed to occur with minimal activity.

Which historical elements indicate **progressive chronic dyspnea**?

- A. Gradual worsening
- B. Increasing limitation of daily activities
- C. Sudden onset at rest
- D. Long duration
- E. Complete absence of exertional symptoms

Correct answers: A, B, D.

32.** A patient presents with expiratory dyspnea and prolonged expiration.

Which historical findings support an **obstructive pulmonary mechanism**?

- A. Wheezing
- B. Loss of lung elasticity
- C. Inspiratory stridor
- D. History of smoking
- E. Sudden onset at rest

Correct answers: A, B, D.

33.** A patient reports dyspnea affecting both respiratory phases, accompanied by tachypnea and anxiety.

Which conclusions can be drawn from history alone?

- A. Dyspnea is mixed
- B. Disease severity may be significant
- C. Cardiac causes are excluded
- D. Tachypnea often accompanies mixed dyspnea
- E. Dyspnea must be acute

Correct answers: A, B, D.

34.** A patient complains of chest pain that is sharp, localized, and worsened by coughing and deep breathing.

Which historical features support a diagnosis of **pleuritic pain**?

- A. Sharp quality
- B. Exacerbation with respiration
- C. Crushing sensation
- D. Localization to one hemithorax
- E. Radiation to mandible

Correct answers: A, B, D.

35.** A patient with chronic cough reports episodes of syncope after intense coughing fits.

Which mechanisms may explain this complication?

- A. Increased intrathoracic pressure
- B. Carotid sinus stimulation
- C. Reduced cerebral perfusion
- D. Bronchial obstruction only
- E. Absence of any hemodynamic effect

Correct answers: A, B, C.

36.** A patient describes a metallic cough and imaging reveals a large pulmonary cavity.

Which historical clues support the diagnosis of **metallic cough**?

- A. Echoing quality
- B. Resonance in rigid air-filled cavity
- C. Occurrence only during sleep
- D. Association with cavitary lung disease
- E. Vocal cord paralysis

Correct answers: A, B, D.

37.** A patient suddenly expectorates a very large volume of purulent sputum after exertion.

Which historical elements define **vomica**?

- A. Sudden expectoration
- B. Large sputum volume (>300 mL)
- C. Gradual elimination over several days
- D. Possible preceding dyspnea
- E. Always associated with hemoptysis

Correct answers: A, B, D.

38.** A patient presents with coughing up blood without nausea, vomiting, or melena.

Which features confirm **hemoptysis**?

- A. Blood originates below the larynx
- B. Blood mixed with sputum
- C. Absence of digestive symptoms
- D. Acidic taste
- E. Presence of melena

Correct answers: A, B, C.

39.** A patient reports chest pain triggered by effort, radiating to the left arm and mandible, relieved by rest.

Which features indicate **ischemic cardiac pain**?

- A. Crushing quality
- B. Typical radiation
- C. Reproduction by palpation
- D. Relation to exertion
- E. Worsening with deep inspiration

Correct answers: A, B, D.

40.** A patient complains of chest pain reproduced by palpation and aggravated by trunk movement.

Which features support a **musculoskeletal cause?**

- A. Reproduction by palpation
- B. Relation to movement
- C. Sharp inspiratory pain
- D. Radiation to mandible
- E. Relief with nitrates

Correct answers: A, B.

Assertion-reason questions

All the questions from this paragraph will follow the standard format: A is an assertion, R is a reason. Options: A/B/C/D/E. You have to choose which option represents the correct answer.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

1. **A:** The site of a respiratory symptom should be identified as precisely as possible during history taking.

R: Precise localization helps differentiate between pleural, pulmonary, and extrathoracic causes.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A.

2. **A:** Sudden-onset dyspnea appearing at rest suggests an acute respiratory or cardiovascular event.

R: Chronic respiratory diseases usually develop abruptly.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: C.

3. **A:** Dyspnea may occur in pulmonary, cardiac, and psychogenic conditions.

R: Dyspnea is a pathognomonic symptom for pulmonary disease.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: C.

4. **A:** Expiratory dyspnea is commonly associated with obstructive pulmonary diseases.

R: Obstructive diseases are characterized by prolonged expiration due to loss of lung elasticity.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A.

5. **A:** Mixed dyspnea often indicates severe respiratory pathology.

R: Mixed dyspnea involves difficulty during both inspiration and expiration.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A.

6. **A:** Chest pain that worsens with deep inspiration and coughing is suggestive of pleural involvement.

R: The pleura is sensitive to stretching during respiratory movements.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A.

7. **A:** Cough has epidemiological importance.

R: Cough facilitates the spread of pathogens through respiratory droplets.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A.

8. **A:** A metallic cough may occur in patients with large pulmonary cavities.

R: Sound waves resonate in rigid, air-filled cavities of the lung.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A.

9. **A:** Vomica represents the sudden expectoration of a large amount of sputum.

R: Vomica may be preceded by dyspnea due to sudden drainage of a pulmonary collection.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A.

10. **A:** Hemoptysis refers to the expectoration of blood originating below the larynx.

R: Hemoptysis can be confirmed by gastroscopy.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: C.

11. **A:** Identifying the exact site of a respiratory symptom is an essential part of anamnesis.

R: Localization of symptoms has no impact on differential diagnosis.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: C.

12. **A:** The onset of dyspnea provides important information about disease acuity.

R: Sudden onset dyspnea is more suggestive of acute pathology than chronic disease.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A.

13. **A:** The severity of dyspnea can be assessed by evaluating limitations in daily activities.

R: Functional limitation reflects the physiological impact of respiratory impairment.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A.

14. **A:** Inspiratory dyspnea is usually caused by lower airway obstruction.

R: Upper airway obstruction typically produces difficulty during inspiration.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: D.

15. **A:** Expiratory dyspnea is frequently associated with obstructive lung diseases.

R: Obstructive lung diseases cause prolonged expiration due to airflow limitation.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A.

16. **A:** Mixed dyspnea may indicate advanced or severe respiratory disease.

R: Mixed dyspnea involves difficulty during both inspiration and expiration.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A.

17. **A:** Chest pain that radiates to the left arm and mandible suggests cardiac ischemia.

R: Cardiac pain typically has a crushing quality and characteristic radiation.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A.

18. **A:** Systemic symptoms such as weight loss and fatigue may accompany respiratory malignancies.

R: These symptoms reflect chronic disease and increased metabolic demand.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A.

19. **A:** Cough can have epidemiological importance.

R: Cough contributes to the dissemination of infectious agents via respiratory droplets.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A.

20. **A:** Hemoptysis must be differentiated from hematemesis during history taking.

R: Hematemesis originates from the lower respiratory tract.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: C.

21. **A:** Asking the patient to point to the site of pain improves the accuracy of symptom localization.

R: Visual identification by the examiner helps differentiate localized from diffuse pain.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A.

22. **A:** Dyspnea that develops gradually over months suggests chronic respiratory disease.

R: Chronic diseases usually evolve slowly rather than abruptly.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A.

23. **A:** Severity of dyspnea is independent of functional limitation.

R: Dyspnea severity can be assessed by its impact on daily activities.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: D.

24. **A:** Psychogenic dyspnea may occur in the absence of organic disease.

R: Anxiety can alter breathing patterns and perception of air hunger.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A.

25. **A:** Expiratory dyspnea is characterized by difficulty during expiration.

R: Loss of lung elasticity and airway obstruction prolongs expiratory time.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A.

26. **A:** Chest pain aggravated by coughing and deep inspiration suggests pleural pathology.

R: The parietal pleura is sensitive to stretching during respiratory movements.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A.

27. **A:** Repeated coughing may lead to complications such as syncope or hernia formation.

R: Sustained increases in intrathoracic and intra-abdominal pressure occur during coughing.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A.

28. **A:** Metallic cough is typically associated with vocal cord paralysis.

R: Metallic cough results from sound resonance in large, rigid, air-filled cavities.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: D.

29. **A:** Vomica refers to gradual expectoration of sputum over several days.

R: Vomica involves sudden drainage of a pulmonary collection into the bronchial tree.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: D.

30. **A:** Hemoptysis may be accompanied by nausea and acidic taste.

R: Blood in hemoptysis originates below the larynx.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: D.

31. **A:** Proper identification of symptom location is essential in respiratory anamnesis.

R: Symptom localization contributes to distinguishing pulmonary, pleural, and extrathoracic causes.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A.

32. **A:** Dyspnea that appears suddenly at rest is unlikely to be caused by a chronic disease.

R: Chronic respiratory diseases usually develop gradually over time.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A.

33. **A:** Dyspnea severity is best assessed only by respiratory rate measurement.

R: Functional limitation during daily activities reflects the clinical impact of dyspnea.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: D.

34. **A:** Inspiratory dyspnea commonly results from upper airway obstruction.

R: Upper airway obstruction produces difficulty predominantly during inspiration.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A.

35. **A:** Expiratory dyspnea is frequently encountered in obstructive pulmonary diseases.

R: Airflow limitation leads to prolonged expiration.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A.

36. **A:** Chest pain reproduced by palpation is unlikely to be of cardiac origin.

R: Cardiac ischemic pain is typically not reproducible by palpation.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A.

37. **A:** Cough may cause complications beyond the respiratory system.

R: Increased intrathoracic and intra-abdominal pressures occur during forceful coughing.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A.

38. **A:** Metallic cough is produced by asymmetric vocal cord involvement.

R: Metallic cough results from resonance of sound waves in rigid air-filled cavities.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: D.

39. **A:** Vomica represents sudden evacuation of a pulmonary collection into the bronchial tree.

R: Vomica is typically associated with gradual sputum elimination.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: C.

40. **A:** Hemoptysis should be differentiated from hematemesis during history taking.

R: Hematemesis originates from the upper gastrointestinal tract.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A.

Difficult questions

1.* A patient reports dyspnea that initially occurred only during intense exertion but is now present during minimal daily activities.

Which historical element MOST strongly indicates **disease progression?**

- A. Presence of dyspnea
- B. Exertional onset
- C. Gradual reduction in exercise tolerance
- D. Association with cough
- E. Absence of chest pain

Correct answer: C.

2. Which historical features suggest **severe chronic dyspnea** rather than mild disease?

- A. Dyspnea during minimal daily activities
- B. Dyspnea present only during intense exercise
- C. Progressive reduction in exercise tolerance
- D. Dyspnea occurring at rest
- E. Complete absence of functional limitation

Correct answers: A, C, D.

3.* A patient has expiratory dyspnea with prolonged expiration and wheezing.

Which mechanism BEST explains this finding?

- A. Upper airway obstruction
- B. Loss of lung elasticity and airflow limitation
- C. Reduced chest wall compliance
- D. Neuromuscular weakness
- E. Pleural irritation

Correct answer: B.

4. Which patterns of dyspnea should immediately raise concern for an **acute life-threatening condition?**

- A. Sudden onset dyspnea at rest
- B. Dyspnea slowly progressive over years
- C. Dyspnea associated with pleuritic chest pain
- D. Dyspnea relieved by reassurance
- E. Dyspnea appearing during sleep without exertion

Correct answers: A, C, E.

5.* Dyspnea involving both inspiratory and expiratory phases, accompanied by tachypnea, MOST strongly suggests:

- A. Mild disease
- B. Isolated upper airway obstruction
- C. Severe or advanced respiratory pathology
- D. Purely cardiac disease
- E. Psychogenic disorder

Correct answer: C.

6. Which features support an **obstructive mechanism** of dyspnea based on history alone?

- A. Prolonged expiration
- B. Wheezing
- C. Inspiratory stridor
- D. Loss of lung elasticity
- E. Sharp pleuritic chest pain

Correct answers: A, B, D.

7.* Which complication of chronic cough is MOST directly related to repeated increases in intrathoracic pressure?

- A. Hemoptysis
- B. Vomica
- C. Syncope
- D. Wheezing
- E. Bronchospasm

Correct answer: C.

8. Which historical elements define **mixed dyspnea** and suggest advanced disease?

- A. Difficulty during both inspiration and expiration
- B. Presence of tachypnea
- C. Dyspnea only during exertion
- D. Occurrence exclusively in psychogenic disorders
- E. Severe limitation of daily activities

Correct answers: A, B, E.

9.* Which historical element MOST strongly supports the diagnosis of **vomica**?

- A. Gradual sputum production
- B. Blood-streaked sputum
- C. Sudden expectoration of a large amount of purulent sputum
- D. Chronic dry cough
- E. Association with fever only

Correct answer: C.

10. Which chest pain characteristics argue **against cardiac ischemia**?

- A. Pain reproduced by palpation
- B. Sharp pain worsened by inspiration
- C. Radiation to left arm and mandible
- D. Crushing retrosternal pain
- E. Relation to trunk movement

Correct answers: A, B, E.

11.* Which pattern of dyspnea is MOST concerning for an **acute life-threatening event**?

- A. Dyspnea progressing over several years
- B. Dyspnea occurring only during exercise
- C. Sudden dyspnea at rest
- D. Dyspnea associated with anxiety
- E. Dyspnea relieved by rest

Correct answer: C.

12. Which complications may result from **repeated intense coughing**?

- A. Syncope
- B. Hernia formation
- C. Vomiting
- D. Increased intra-abdominal pressure
- E. Reduction of intrathoracic pressure

Correct answers: A, B, C, D.

13. * Which historical feature MOST reliably differentiates **psychogenic dyspnea** from organic dyspnea?

- A. Presence of tachypnea
- B. Association with anxiety and improvement with reassurance
- C. Occurrence during physical effort
- D. Presence of cough
- E. Duration of symptoms

Correct answer: B.

14. Which historical clues suggest a **metallic cough** rather than other cough types?

- A. Echoing, resonant quality
- B. Association with large pulmonary cavities
- C. Occurrence exclusively at night
- D. Resonance within rigid air-filled spaces
- E. Production of large amounts of sputum

Correct answers: A, B, D.

15. * Chest pain that is sharp, localized, worsens with deep inspiration, and does not radiate is MOST consistent with:

- A. Coronary ischemia
- B. Aortic dissection
- C. Pleuritic pain
- D. Gastroesophageal reflux
- E. Musculoskeletal strain

Correct answer: C.

16. Which elements support the diagnosis of **vomica** rather than simple productive cough?

- A. Sudden expectoration of very large sputum volume
- B. Possible preceding dyspnea
- C. Gradual sputum elimination over days
- D. Abrupt and explosive expectoration
- E. Always associated with hemoptysis

Correct answers: A, B, D.

17. * A cough described as "metallic" is BEST explained by:

- A. Vocal cord paralysis
- B. Upper airway inflammation
- C. Resonance of sound in a rigid air-filled pulmonary cavity
- D. Excessive mucus production
- E. Bronchial spasm

Correct answer: C.

18. Which features help differentiate **hemoptysis** from hematemesis during history taking?

- A. Blood mixed with sputum
- B. Absence of nausea and vomiting
- C. Acidic taste of blood
- D. Origin below the larynx
- E. Presence of melena

Correct answers: A, B, D.

19. * Which single historical feature BEST differentiates **hemoptysis** from hematemesis?

- A. Dark color of blood
- B. Presence of nausea
- C. Blood mixed with sputum
- D. Quantity of blood
- E. Associated chest pain

Correct answer: C.

20. Which historical findings suggest a **non-respiratory cause** of chest pain?

- A. Pain related to trunk movement
- B. Pain reproduced by palpation
- C. Pain worsened by deep inspiration
- D. Radiation to the mandible
- E. Association with exertion

Correct answers: A, B.

21.* A patient reports dyspnea that initially appeared during intense physical effort and now occurs during dressing and eating.

Which single historical element MOST strongly indicates **advanced disease severity**?

- A. Presence of dyspnea
- B. Long duration of symptoms
- C. Progression to limitation of daily activities
- D. Association with cough
- E. Absence of chest pain

Correct answer: C.

22. Which historical features suggest **severe or advanced dyspnea**?

- A. Dyspnea at rest
- B. Dyspnea during minimal daily activities
- C. Dyspnea only during intense exertion
- D. Progressive reduction in exercise tolerance
- E. Sudden onset during rest

Correct answers: A, B, D.

23.* Which form of dyspnea is MOST suggestive of **upper airway obstruction**?

- A. Expiratory dyspnea
- B. Mixed dyspnea
- C. Inspiratory dyspnea
- D. Psychogenic dyspnea
- E. Cardiac dyspnea

Correct answer: C.

24. Which findings support an **obstructive pulmonary mechanism** based on history?

- A. Prolonged expiration
- B. Wheezing
- C. Inspiratory stridor
- D. Loss of lung elasticity
- E. Sharp pleuritic chest pain

Correct answers: A, B, D.

25.* Chest pain that is sharp, localized, worsens with deep inspiration, and is relieved by shallow breathing MOST likely originates from:

- A. Myocardium
- B. Aorta
- C. Pleura
- D. Esophagus
- E. Chest wall muscles

Correct answer: C.

26. Which features argue **against cardiac ischemia** as the cause of chest pain?

- A. Pain reproduced by palpation
- B. Sharp pain worsened by inspiration
- C. Crushing retrosternal pain
- D. Radiation to the left arm
- E. Relation to trunk movement

Correct answers: A, B, E.

27.* Which historical feature MOST reliably supports the diagnosis of **hemoptysis**?

- A. Blood with acidic taste
- B. Blood mixed with sputum
- C. Presence of nausea
- D. Association with melena
- E. Dark-colored blood

Correct answer: B.

28. Which complications may result from **repeated intense coughing**?

- A. Syncope
- B. Vomiting
- C. Hernia formation
- D. Increased intrathoracic pressure
- E. Decreased intra-abdominal pressure

Correct answers: A, B, C, D.

29.* Which historical feature MOST strongly suggests **advanced chronic respiratory disease**?

- A. Dyspnea only during intense exercise
- B. Dyspnea relieved by rest
- C. Dyspnea during dressing and eating
- D. Episodic dyspnea during anxiety
- E. Absence of associated symptoms

Correct answer: C.

30. Which elements support the diagnosis of **vomica**?

- A. Sudden expectoration
- B. Large volume of sputum
- C. Gradual elimination over days
- D. Possible preceding dyspnea
- E. Always associated with hemoptysis

Correct answers: A, B, D.

31.* Which presentation of dyspnea is MOST alarming and requires immediate evaluation?

- A. Slowly progressive dyspnea over years
- B. Dyspnea only during physical effort
- C. Sudden dyspnea at rest
- D. Dyspnea associated with obesity
- E. Dyspnea relieved by reassurance

Correct answer: C.

32. Which historical features suggest a **non-respiratory origin** of chest pain?

- A. Reproduction by palpation
- B. Relation to trunk movement
- C. Worsening with deep inspiration
- D. Radiation to mandible
- E. Association with exertion

Correct answers: A, B.

33.* Expiratory dyspnea with prolonged expiration is MOST commonly caused by:

- A. Upper airway obstruction
- B. Pleural inflammation
- C. Loss of lung elasticity
- D. Neuromuscular disease
- E. Chest wall rigidity

Correct answer: C.

34. Which historical features indicate **severe dyspnea**?

- A. Dyspnea at rest
- B. Dyspnea during minimal daily activities
- C. Dyspnea only during intense exercise
- D. Progressive reduction in exercise tolerance
- E. Dyspnea relieved immediately by reassurance

Correct answers: A, B, D.

35.* Chest pain that worsens with coughing and deep inspiration but does not radiate is MOST likely:

- A. Cardiac ischemic pain
- B. Aortic dissection
- C. Pleuritic pain
- D. Esophageal spasm
- E. Psychogenic pain

Correct answer: C.

36. Which findings support an **obstructive pulmonary mechanism** of dyspnea?

- A. Prolonged expiration
- B. Wheezing
- C. Inspiratory stridor
- D. Loss of lung elasticity
- E. Sharp pleuritic chest pain

Correct answers: A, B, D.

37.* Which historical feature BEST differentiates **hemoptysis** from **hematemesis**?

- A. Dark color of blood
- B. Blood mixed with sputum
- C. Presence of nausea
- D. Large volume of blood
- E. Associated chest pain

Correct answer: B.

38. Which complications may result from **repeated intense coughing**?

- A. Syncope
- B. Vomiting
- C. Hernia formation
- D. Increased intra-abdominal pressure
- E. Reduced intrathoracic pressure

Correct answers: A, B, C, D.

39.* Chest pain reproduced by palpation and aggravated by movement is MOST suggestive of:

- A. Pulmonary embolism
- B. Coronary ischemia
- C. Musculoskeletal origin
- D. Pleurisy
- E. Aortic pathology

Correct answer: C.

40. Which elements support the diagnosis of **vomica**?

- A. Sudden expectoration of sputum
- B. Large volume of sputum (>300 mL)
- C. Gradual sputum elimination over days
- D. Possible preceding dyspnea
- E. Always associated with hemoptysis

Correct answers: A, B, D.

Chapter IV. Physical examination in respiratory system

Ciprian Ilie Rosca, Cristian Andrei Sarau

Mixed questions

1. Which respiratory rate is normal for a healthy adult at rest?
A. 10-12 breaths/min
B. 14-16 breaths/min
C. 16-18 breaths/min
D. 20-22 breaths/min
E. 24-26 breaths/min

Correct answer: C

2. In adults, abdominal respiration occurs mainly during:
A. Exercise
B. Sleep
C. Asthma attacks
D. Severe COPD
E. Anxiety episodes

Correct answer: B

3. A patient presents with a barrel chest. Which condition is *most strongly* associated with this morphology?
A. Pulmonary fibrosis
B. Upper airway obstruction
C. COPD
D. Pneumonia
E. Tuberculosis

Correct answer: C

4. Which chest deformity is characterized by *sternal depression* and reduced exercise tolerance?

- A. Pectus carinatum
- B. Barrel chest
- C. Asthenic chest
- D. Pectus excavatum
- E. Rachitic chest

Correct answer: D

5. During chest palpation, pain in Valleix (painful) points typically indicates:

- A. Pleural effusion
- B. Intercostal neuralgia
- C. Pneumonia
- D. Pulmonary fibrosis
- E. Mediastinal tumors

Correct answer: B

6. Choose the true statements:

- A. Normal respiratory rate for an adult person is 18-38 r/min.
- B. Barrel chest is seen in chronic bronchial asthma.
- C. Rachitic chest is seen in vitamin C deficiency.
- D. Pectus excavatum is a congenital deformity of the anterior chest wall characterized by protrusion of the sternum and costal cartilages.
- E. Tactile vocal fremitus is found in pneumothorax.

Correct answer: B

7. Pulmonary opacities seen on X-ray can not be found in:

- A. Pneumothorax
- B. Pneumonia
- C. Tuberculosis
- D. Hemosiderosis
- E. Pleural effusion

Correct answer: A

8. The normal respiratory rate in a healthy adult at rest is:

- A. 10-12 breaths/min
- B. 12-14 breaths/min
- C. 16-18 breaths/min
- D. 20-24 breaths/min
- E. 30-40 breaths/min

Correct answer: C.

9. Which chest deformity is most commonly associated with pulmonary emphysema?

- A. Asthenic chest
- B. Pectus excavatum
- C. Barrel chest
- D. Rachitic chest
- E. Kyphoscoliotic chest

Correct answer: C.

10. Tactile vocal fremitus is typically absent in:

- A. Lobar pneumonia
- B. Pulmonary fibrosis
- C. Lung tumor with patent bronchus
- D. Massive pneumothorax
- E. Pulmonary congestion

Correct answer: D.

11. Lasegue's maneuver is used to assess:

- A. Apical lung expansion
- B. Chest wall tenderness
- C. Basal lung expansion
- D. Vocal resonance
- E. Intercostal neuralgia

Correct answer: C.

12. During chest percussion, the normal sound heard over healthy lung tissue is:

- A. Tympany
- B. Flatness
- C. Dullness
- D. Resonance
- E. Hyperresonance

Correct answer: D.

13. Which percussion finding is most suggestive of pleural effusion?

- A. Hyperresonance
- B. Tympanitic resonance
- C. Dullness or flatness
- D. Normal resonance
- E. Amphoric sound

Correct answer: C.

14. Vesicular breath sounds are best described as:

- A. Loud, high-pitched sounds with equal inspiration and expiration
- B. Harsh sounds heard mainly over the trachea
- C. Musical sounds heard predominantly during expiration
- D. Soft, low-pitched sounds with longer inspiration than expiration
- E. Absent sounds over the entire lung field

Correct answer: D.

15. Wheezes are produced by:

- A. Opening of collapsed alveoli
- B. Friction between pleural layers
- C. Turbulent airflow through narrowed bronchi
- D. Fluid in the pleural cavity
- E. Compression of lung parenchyma

Correct answer: C.

16. Which condition is most likely to produce pulmonary opacities on chest X-ray?

- A. Simple pneumothorax
- B. Pulmonary emphysema
- C. Pneumonia
- D. Large pulmonary cavity
- E. Tension pneumothorax

Correct answer: C.

17. The "Chord sign" (Pitres sign) is useful in the assessment of:

- A. Pneumothorax
- B. Pulmonary fibrosis
- C. Pleural effusion
- D. Bronchial asthma
- E. Pulmonary emphysema

Correct answer: C.

18. Inspiratory intercostal retractions are most suggestive of:

- A. Normal respiratory mechanics
- B. Reduced intrathoracic pressure during expiration
- C. Increased inspiratory effort due to airway obstruction
- D. Pleural effusion with lung compression
- E. Pulmonary hyperinflation

Correct answer: C.

19. Which type of respiration is normally predominant in adult men while awake?

- A. Upper costal respiration
- B. Abdominal respiration
- C. Lower costal respiration
- D. Pure diaphragmatic respiration
- E. Irregular mixed respiration

Correct answer: C.

20. Pectus excavatum is most frequently associated with which clinical consequence?

- A. Hyperinflation of the lungs
- B. Reduced stroke volume and cardiac output
- C. Increased chest wall compliance
- D. Tympanitic percussion sound
- E. Increased vocal fremitus

Correct answer: B.

21. The Angle of Louis (manubriosternal junction) is used primarily to:

- A. Identify the xiphoid process
- B. Assess diaphragmatic excursion
- C. Locate the second rib and second intercostal space
- D. Evaluate pleural friction
- E. Measure thoracic expansion

Correct answer: C.

22. Asymmetric chest expansion during Lasegue's maneuver most strongly suggests:

- A. Bilateral pulmonary emphysema
- B. Normal age-related change
- C. Unilateral pleural or pulmonary pathology
- D. Central airway obstruction
- E. Upper airway inflammation

Correct answer: C.

23. The presence of Damoiseau's curve on percussion is characteristic of:

- A. Pneumothorax
- B. Pulmonary emphysema
- C. Pleural effusion
- D. Lobar pneumonia
- E. Pulmonary fibrosis

Correct answer: C.

24. Skoda's resonance is best described as:

- A. Tympanic sound below pleural fluid
- B. Hyperresonant band above a pleural effusion
- C. Flat percussion note over massive effusion
- D. Amphoric resonance in lung cavities
- E. Normal resonance in emphysema

Correct answer: B.

25. Physiological tracheobronchial (tubular) breath sounds are normally heard:

- A. Over the entire lung surface
- B. At the lung bases posteriorly
- C. Over the trachea and main bronchi
- D. Only in pathological lung consolidation
- E. Exclusively during expiration

Correct answer: C.

26. Unilateral abolition of vesicular breath sounds is most suggestive of:

- A. Bronchial asthma attack
- B. Bilateral pulmonary fibrosis
- C. Massive pleural effusion
- D. Mild bronchitis
- E. Pulmonary congestion

Correct answer: C.

27. A pleural friction rub is typically characterized by all of the following except:

- A. Scratchy or creaking quality
- B. Presence during inspiration and expiration
- C. Localization to a limited area
- D. Disappearance after coughing
- E. Possible disappearance after pleural effusion develops

Correct answer: D.

28. Which respiratory rate best defines tachypnea in an adult at rest?

- A. 14 breaths/min
- B. 16 breaths/min
- C. 18 breaths/min
- D. > 20 breaths/min
- E. > 30 breaths/min

Correct answer: D.

29. An asthenic chest is most commonly associated with:

- A. Pulmonary emphysema
- B. Chronic pulmonary tuberculosis
- C. Acute bronchial asthma
- D. Pleural effusion
- E. Obesity

Correct answer: B.

30. Which physical sign is characteristic of a rachitic chest?

- A. Decreased anteroposterior diameter
- B. Horizontal ribs
- C. Rachitic rosary at costochondral junctions
- D. Prominent manubriosternal angle
- E. Increased thoracic expansion

Correct answer: C.

31. Enlargement of the left supraclavicular lymph node (Virchow-Troisier node) most strongly suggests:

- A. Pulmonary tuberculosis
- B. Lung carcinoma
- C. Lymphoma
- D. Gastric carcinoma
- E. Sarcoidosis

Correct answer: D.

32. Normal thoracic expansion in a healthy adult is approximately:

- A. 1-2 cm
- B. 2-3 cm
- C. 3-4 cm
- D. 5-7 cm
- E. > 10 cm

Correct answer: D.

33. Tactile vocal fremitus is best perceived:

- A. Over the cardiac area
- B. Over the hepatic area
- C. In the interscapular region
- D. Over the supraclavicular fossae
- E. At the lung bases anteriorly

Correct answer: C.

34. In which situation is tactile vocal fremitus most likely to be increased?

- A. Massive pleural effusion
- B. Pneumothorax
- C. Lobar pneumonia with patent bronchus
- D. Obesity
- E. Pleural thickening

Correct answer: C.

35. Percussion at the level of Kroenig's bands is used to assess:

- A. Cardiac dullness
- B. Diaphragmatic excursion
- C. Resonance of the lung apices
- D. Pleural fluid level
- E. Hepatic dullness

Correct answer: C.

36. The normal descent of the lung base during a deep inspiration is approximately:

- A. 0.5 cm
- B. 1 cm
- C. 3 cm
- D. 5 cm
- E. 8 cm

Correct answer: B.

37. A pathological bronchial breath sound heard outside its normal anatomical area most strongly indicates:

- A. Pulmonary emphysema
- B. Bronchial asthma
- C. Pulmonary consolidation with a patent bronchus
- D. Massive pleural effusion
- E. Obesity

Correct answer: C.

38. A change from thoracic to predominantly abdominal breathing in an adult while awake most strongly suggests:

- A. Normal physiological variation
- B. Increased physical conditioning
- C. Restrictive or obstructive pulmonary pathology
- D. Upper airway inflammation
- E. Anxiety-related hyperventilation

Correct answer: C.

39. Dilated superficial veins in the supraspinous and suboccipital fossae (Turbau's sign) are most suggestive of:

- A. Pulmonary emphysema
- B. Superior vena cava syndrome
- C. Pulmonary apex tuberculosis
- D. Chronic bronchitis
- E. Pleural effusion

Correct answer: C.

40. Deviation of the xiphoid process toward one side during inspection most strongly indicates:

- A. Pneumothorax
- B. Pulmonary fibrosis
- C. Pleural effusion on the affected side
- D. Bronchial asthma
- E. Pulmonary emphysema

Correct answer: C.

Progressive Questions

- When measuring chest perimeter, which elements are part of the correct technique? (Select all that apply.)
 - Measurement at the nipple level in men
 - Measurement at the end of normal inspiration
 - Measuring only at the end of forced expiration
 - Using a flexible tape placed horizontally
 - Patient must hold breath during measurement

Correct answers: A, B, D

- Which findings decrease tactile vocal fremitus? (Select all that apply.)
 - Pneumothorax
 - Pulmonary consolidation
 - Pleural thickening
 - Bronchiectasis
 - Large pleural effusion

Correct answers: A, C, E

- Hyperresonance on chest percussion may be found in which conditions? (Select all that apply.)
 - Pneumothorax
 - Pulmonary fibrosis
 - Pleural effusion
 - Large pulmonary cavity
 - Pulmonary emphysema

Correct answers: A, D, E.

- Fine crackles are typically associated with which pathologies? (Select all that apply.)
 - Pulmonary fibrosis
 - End-stage COPD
 - Early pneumonia
 - Acute pulmonary edema
 - Large bronchial secretions

Correct answers: A, C, D

5. Pleural friction rub is characteristic for which conditions? (Select all that apply.)

- A. Tuberculous pleurisy
- B. Pleural mesothelioma
- C. Pneumonia with consolidation
- D. Uremia
- E. Pulmonary embolism with infarction

Correct answers: A, B, D, E.

6. Choose the true statements:

- A. Lasegue's maneuver is performed at the base of the lungs.
- B. Ruault's maneuver with the palmar surface of the fingers, the examiner gently grasps the supraclavicular fossae, perpendicular to the spine, forming a skin fold.
- C. percussion is performed symmetrically, from top to bottom, along the axillary line.
- D. pulmonary base excursion between a deep inspiration and a forced expiration: about 20cm.
- E. normal pulmonary base excursion between a deep inspiration and a forced expiration about 20cm.

Correct answers: A, B.

7. On auscultation:

- A. Rales may be fine crackles (crepitant) or coarse crackles (subcrepitant).
- B. In wheezing the sounds are like whistling
- C. Crackles- turbulent airflow through bronchioles and alveoli containing fluid.
- D. The murmur is present in massive pneumothorax or bronchopulmonary tumors.
- E. Wheezing in massive pleural effusion.

Correct answers: A, B, C.

8. About percussion, can say:

- A. Hyperresonance appears in pulmonary emphysema
- B. Flatness appears in cavities or pneumothorax
- C. Dullness or flatness may indicate atelectasis or tuberculosis
- D. Is done with the whole palm.
- E. Is done with one hand.

Correct answers: A, C.

9. Pulmonary opacities seen on X-ray can be found in:

- A. Pneumothorax
- B. Pneumonia
- C. Tuberculosis
- D. Hemosiderosis
- E. Pleural effusion.

Correct answers: B, C, D, E.

10. Regarding normal respiration in adults, which of the following statements are correct?

- A. Normal respiratory rate at rest is 16-18 breaths/min
- B. Respiratory movements normally have a regular rhythm
- C. Respiratory rate normally exceeds pulse rate
- D. Amplitude of respiratory movements is constant under normal conditions
- E. Respiratory movements are normally asymmetrical

Correct answers: A, B, D.

11. Regarding barrel chest, which statements are correct?

- A. The anteroposterior diameter is increased
- B. The xiphoid angle is usually greater than 90°
- C. It is commonly seen in pulmonary emphysema
- D. It is typically associated with vitamin D deficiency
- E. The ribs tend to have a more horizontal orientation

Correct answers: A, B, C, E.

12. Regarding rachitic chest, which statements are correct?

- A. It is related to vitamin D deficiency
- B. Harrison's sulcus may be present
- C. Rachitic rosary appears at costochondral junctions
- D. It is caused by vitamin C deficiency
- E. Long bone deformities may be associated

Correct answers: A, B, C, E.

13. Regarding pectus excavatum, which statements are correct?

- A. It is a congenital deformity of the anterior chest wall
- B. It is characterized by protrusion of the sternum
- C. Cardiac compression may occur in severe cases
- D. Reduced vital capacity may be observed
- E. It is more frequent than pectus carinatum

Correct answers: A, C, D, E.

14. During chest inspection, which findings suggest increased inspiratory effort?

- A. Inspiratory intercostal retractions
- B. Expiratory bulging of intercostal spaces
- C. Symmetrical chest movements
- D. Use of accessory respiratory muscles
- E. Reduced respiratory rate

Correct answers: A, D.

15. Regarding thoracic expansion assessment, which statements are correct?

- A. Normal adult expansion is approximately 5-7 cm
- B. Asymmetrical expansion suggests unilateral pathology
- C. Lasegue's maneuver evaluates apical expansion
- D. Reduced expansion may occur in pleural effusion
- E. Expansion is measured only during forced respiration

Correct answers: A, B, D.

16. Regarding tactile vocal fremitus, which statements are correct?

- A. It represents vibrations transmitted from the larynx through the lungs
- B. It is increased in pulmonary consolidation with patent bronchi
- C. It is absent in massive pleural effusion
- D. It is best assessed using the fingertips only
- E. It is decreased in pneumothorax

Correct answers: A, B, C, E.

17. Regarding chest percussion, which statements are correct?

- A. Percussion assesses air content of lung parenchyma
- B. Hyperresonance may be found in emphysema
- C. Flatness suggests massive pleural effusion
- D. Percussion is performed using the entire palm
- E. Dullness may be present in pulmonary consolidation

Correct answers: A, B, C, E.

18. Regarding normal respiratory sounds, which statements are correct?

- A. Vesicular breath sounds are soft and low-pitched
- B. Inspiration is longer than expiration in vesicular breathing
- C. Tracheobronchial sounds are normally heard over the entire lung surface
- D. Bronchovesicular sounds are heard in interscapular regions
- E. Vesicular sounds disappear normally during expiration

Correct answers: A, B, D.

19. Regarding pathological respiratory sounds, which statements are correct?

- A. Bronchial breath sounds outside normal areas suggest consolidation
- B. Vesicular murmur may be abolished in massive pneumothorax
- C. Pleural friction rub disappears after coughing
- D. Wheezes are caused by airflow through narrowed bronchi
- E. Crackles are produced by pleural surface friction

Correct answers: A, B, D.

20. Regarding types of respiration according to age and sex, which statements are correct?

- A. Newborns and infants predominantly show diaphragmatic respiration
- B. Children aged 3-7 years usually have thoracic respiration
- C. Adult women predominantly show lower costal respiration
- D. During sleep, abdominal respiration predominates regardless of sex
- E. Boys aged 8-10 years may show thoracoabdominal respiration

Correct answers: A, B, D, E.

21. Regarding thoracic topographic zones, which statements are correct?

- A. The suprascapular zone corresponds externally to the supraspinous fossa
- B. Chauvet's alarm zone is located in the middle thoracic zone
- C. The scapular zone corresponds internally to the interscapulovertebral space
- D. The subscapular zone corresponds to the basal thoracic area
- E. Thoracic topography has no clinical relevance

Correct answers: A, C, D.

22. Regarding changes in intercostal spaces during respiration, which statements are correct?

- A. Inspiratory intercostal retractions indicate increased inspiratory effort
- B. Expiratory bulging of intercostal spaces suggests air trapping
- C. Symmetrical intercostal changes suggest obstruction below the tracheal bifurcation
- D. Asymmetrical intercostal changes may indicate unilateral airway obstruction
- E. Intercostal retractions are normal during quiet breathing

Correct answers: A, B, D.

23. Regarding chest inspection findings related to skin and superficial structures, which statements are correct?

- A. Shawl-like edema may suggest superior vena cava obstruction
- B. Increased pilosity may reflect endocrine disorders
- C. Subclavicular venectasias may indicate intrathoracic compression
- D. Axillary adenopathy may be associated with lung cancer
- E. Virchow-Troisier node enlargement suggests pulmonary emphysema

Correct answers: A, B, C, D.

24. Regarding chest perimeter measurement in children, which statements are correct?

- A. At birth, chest circumference is smaller than head circumference
- B. Chest circumference increases by approximately 3 cm per year in early childhood
- C. Head and chest circumferences become equal between 6-12 months
- D. Chest measurements should be taken at maximal inspiration
- E. Chest circumference exceeds head circumference by age 5

Correct answers: A, C, E.

25. Regarding measurement of thoracic expansion in adults, which statements are correct?

- A. Normal expansion is approximately 5-7 cm
- B. Expansion is measured at the level of the nipples in men
- C. Decreased expansion may suggest ankylosing spondylitis
- D. Expansion is normally symmetrical
- E. Expansion has no diagnostic value

Correct answers: A, B, C, D.

26. Regarding the Chord sign (Pitres sign), which statements are correct?

- A. It involves deviation of the sternum toward the affected side
- B. It is assessed using a vertical reference line
- C. It is useful in detecting pleural effusion
- D. A deviation greater than 3 cm indicates a small effusion
- E. It has relevance only in pneumothorax

Correct answers: A, B, C.

27. Regarding chest palpation, which statements are correct?

- A. Palpation should be performed symmetrically
- B. Valleix points are assessed in suspected intercostal neuralgia
- C. Pain at Gueneau de Mussy's point may suggest diaphragmatic irritation
- D. Palpation is unnecessary if inspection is normal
- E. Paravertebral muscle contracture may indicate pleurisy

Correct answers: A, B, C, E.

28. Regarding respiratory excursion maneuvers, which statements are correct?

- A. Lasegue's maneuver assesses basal lung expansion
- B. Ruault's maneuver evaluates apical lung expansion
- C. Asymmetric thumb movement suggests unilateral pathology
- D. These maneuvers are performed during forced expiration only
- E. Reduced apical expansion may be seen after tuberculosis

Correct answers: A, B, C, E.

29. Regarding percussion assessment of lung bases, which statements are correct?

- A. The lung base normally projects at the level of T10 posteriorly
- B. During deep inspiration, the lung base descends
- C. Normal pulmonary base excursion is approximately 6 cm
- D. Hertz maneuver assesses apical lung resonance
- E. Reduced base excursion may be seen in fibrosis

Correct answers: A, B, C, E.

30. Regarding the technique of chest percussion, which statements are correct?

- A. Percussion movements originate mainly from the wrist
- B. The pleximeter finger is placed parallel to the ribs
- C. Percussion vibrations reach a depth of approximately 5-7 cm
- D. Strong percussion always increases diagnostic accuracy
- E. Percussion should be performed symmetrically

Correct answers: A, B, C, E.

31. Regarding percussion findings in pleural effusion, which statements are correct?

- A. Dullness or flatness is typically present over the fluid
- B. Hyperresonance is found below the effusion
- C. Damoiseau's curve represents the upper limit of the effusion
- D. Garland's triangle shows tympanitic dullness
- E. Grocco-Rauchfuss triangle is found on the side opposite the effusion

Correct answers: A, C, D, E.

32. Regarding Skoda's resonance, which statements are correct?

- A. It is found above the upper limit of pleural effusion
- B. It is more resonant than normal lung percussion
- C. It is tympanic in quality
- D. It is caused by compression of aerated lung tissue
- E. It is typically found in small effusions only

Correct answers: A, B, D.

33. Regarding chest auscultation technique, which statements are correct?

- A. The diaphragm of the stethoscope is used
- B. The entire respiratory cycle should be auscultated
- C. The patient should breathe through the nose
- D. Posterior auscultation is performed with arms crossed anteriorly
- E. Auscultation should proceed symmetrically from top to bottom

Correct answers: A, B, D, E.

34. Regarding vesicular breath sounds, which statements are correct?

- A. They are generated in terminal bronchioles and alveoli
- B. They are soft and low-pitched
- C. Expiration is longer than inspiration
- D. They are best heard over lateral and posterior lung fields
- E. They are normally heard over the trachea

Correct answers: A, B, D.

35. Regarding pathological bronchial breath sounds, which statements are correct?

- A. They indicate lung consolidation with a patent bronchus
- B. They may be heard in pulmonary cavities
- C. Amphoric sound is heard in large cavities with smooth walls
- D. They are normally heard over peripheral lung fields
- E. They may be present above pleural effusions

Correct answers: A, B, C, E.

36. Regarding wheezes and rhonchi, which statements are correct?

- A. Wheezes are high-pitched sounds
- B. Rhonchi are typically low-pitched
- C. Both are produced by turbulent airflow in narrowed bronchi
- D. They are classified as discontinuous sounds
- E. They may change after coughing

Correct answers: A, B, C, E.

37. Regarding crackles, which statements are correct?

- A. Fine crackles are usually heard at the end of inspiration
- B. Coarse crackles may be heard during expiration
- C. Crackles are caused by pleural surface friction
- D. Crackles may intensify or disappear after coughing
- E. Crackles are classified as discontinuous sounds

Correct answers: A, B, D, E.

38. Regarding pleural friction rub, which statements are correct?

- A. It is produced by friction between inflamed pleural layers
- B. It is heard during both inspiration and expiration
- C. It disappears after coughing
- D. It may disappear when pleural effusion develops
- E. It is often localized to a limited area

Correct answers: A, B, D, E.

39. Regarding stridor, which statements are correct?

- A. It is a harsh, high-pitched inspiratory sound
- B. It is best heard over the neck
- C. It suggests upper airway obstruction
- D. It is a normal variant in adults
- E. It represents an urgent sign of airway compromise

Correct answers: A, B, C, E.

40. Regarding the classification of respiratory sounds based on continuity and mechanism, which statements are correct?

- A. Continuous sounds are typically musical in character
- B. Discontinuous sounds are usually produced by opening of small airways or alveoli
- C. Wheezes belong to the category of discontinuous sounds
- D. Crackles are usually heard in peripheral and basal lung areas
- E. Continuous sounds are most often associated with pleural pathology

Correct answers: A, B, D.

Advanced clinical vignettes

1.** A 68-year-old man with a long history of smoking presents with progressive dyspnea. On inspection, the chest has an increased anteroposterior diameter, horizontal ribs, and widened intercostal spaces. Which findings are consistent with this clinical picture?

- A. Barrel chest
- B. Xiphoid angle greater than 90°
- C. Reduced thoracic diameters
- D. Association with pulmonary emphysema
- E. Depressed suprasternal fossae

Correct answers: A, B, D.

2.** A 4-year-old child presents with delayed growth and chest wall deformities. Physical examination reveals bead-like prominences at the costochondral junctions and a horizontal groove at the lower thorax. Which statements are correct?

- A. The condition is related to vitamin D deficiency
- B. Harrison's sulcus may be present
- C. The deformity is called pectus excavatum
- D. Long bone deformities may coexist
- E. The condition is caused by vitamin C deficiency

Correct answers: A, B, D.

3.** A 19-year-old male complains of exertional dyspnea and chest discomfort. Examination shows a sunken sternum. Which consequences or associations are correct for this deformity?

- A. Reduced vital capacity
- B. Compression of the heart in severe cases
- C. Increased chest wall compliance
- D. Association with Marfan syndrome
- E. Protrusion of the sternum

Correct answers: A, B, D.

4.** A patient presents with asymmetric chest expansion, more limited on the right side. Which conditions or findings could explain this observation?

- A. Right-sided pleural effusion
- B. Right lower lobe pneumonia
- C. Bilateral pulmonary emphysema
- D. Right-sided pneumothorax
- E. Normal physiological variation

Correct answers: A, B, D.

5.** During physical examination, tactile vocal fremitus is markedly decreased over the entire left hemithorax. Which diagnoses are consistent with this finding?

- A. Massive pleural effusion
- B. Pneumothorax
- C. Lobar pneumonia with patent bronchus
- D. Pulmonary fibrosis
- E. Complete bronchial obstruction

Correct answers: A, B, E.

6.** Percussion of the right hemithorax reveals dullness at the base with an upper curved limit and hyperresonance immediately above it. Which interpretations are correct?

- A. Presence of pleural effusion
- B. Identification of Damoiseau's curve
- C. Presence of Skoda's resonance
- D. Pneumothorax as the primary diagnosis
- E. Compression of aerated lung tissue above the fluid

Correct answers: A, B, C, E.

7.** On auscultation, bronchial breath sounds are heard over the right lower lung field, where vesicular sounds are normally expected. Which statements are correct?

- A. This suggests pulmonary consolidation
- B. A patent bronchus is required for this finding
- C. This is a normal variant in thin patients
- D. It may occur in lobar pneumonia
- E. It excludes pleural effusion

Correct answers: A, B, D.

8.** A patient with acute asthma exacerbation presents with widespread high-pitched sounds on auscultation. Which statements are correct?

- A. The sounds are wheezes
- B. They are produced by turbulent airflow through narrowed bronchi
- C. They are classified as discontinuous sounds
- D. They may change after coughing
- E. They are typically low-pitched

Correct answers: A, B, D.

9.** A localized, scratchy sound is heard during both inspiration and expiration over the lower lateral chest wall and does not change after coughing. Which statements are correct?

- A. The sound is a pleural friction rub
- B. It may disappear if pleural effusion develops
- C. It is caused by airflow through secretions
- D. It may be associated with pleuritis
- E. It is best heard over the trachea

Correct answers: A, B, D.

10.** A patient presents with a harsh, high-pitched inspiratory sound best heard over the neck, associated with respiratory distress. Which statements are correct?

- A. The sound is stridor
- B. It indicates upper airway obstruction
- C. It is usually benign in adults
- D. It represents a medical emergency
- E. It originates from the alveoli

Correct answers: A, B, D.

11.** A 72-year-old patient is admitted for acute dyspnea. Respiratory rate is 26 breaths/min, shallow and rapid. Which statements correctly characterize this respiratory pattern?

- A. It represents tachypnea
- B. It may be seen in pneumonia
- C. It is normal in resting adults
- D. It may occur with increased intra-abdominal pressure
- E. It is incompatible with respiratory muscle paralysis

Correct answers: A, B, D.

12.** A patient with severe asthma presents with visible inspiratory effort. Inspection reveals marked intercostal retractions. Which statements are correct?

- A. This indicates increased inspiratory effort
- B. It suggests airway obstruction
- C. It is typically seen in restrictive lung disease only
- D. It may coexist with use of accessory respiratory muscles
- E. It indicates decreased intrathoracic pressure during inspiration

Correct answers: A, B, D, E.

13.** During routine examination, thoracic expansion is measured at 2 cm bilaterally in an adult. Which interpretations are correct?

- A. This value is below normal
- B. It may suggest restrictive lung disease
- C. It may be seen in ankylosing spondylitis
- D. It is normal in healthy adults
- E. It has no clinical significance

Correct answers: A, B, C.

14.** A 60-year-old man presents with fever and productive cough. Examination shows increased tactile vocal fremitus over the right lower lung field. Which statements are correct?

- A. This suggests pulmonary consolidation
- B. A patent bronchus is required
- C. This finding excludes pneumonia
- D. It may be found in lobar pneumonia
- E. It is typically decreased in this situation

Correct answers: A, B, D.

15.** During examination, the examiner performs Lasegue's maneuver and notes reduced movement of the right thumb. Which conditions could explain this finding?

- A. Right-sided pleural effusion
- B. Right lower lobe pneumonia
- C. Bilateral pulmonary emphysema
- D. Right-sided pneumothorax
- E. Normal physiological aging

Correct answers: A, B, D.

16.** Percussion reveals dullness over the lower left hemithorax and a hyperresonant band above it. Which statements are correct?

- A. The findings suggest pleural effusion
- B. The curved upper limit represents Damoiseau's curve
- C. The hyperresonant band corresponds to Skoda's resonance
- D. These findings exclude pneumothorax
- E. The hyperresonance is caused by compressed aerated lung

Correct answers: A, B, C, E.

17.** On auscultation, vesicular breath sounds are absent over the entire right lung. Which diagnoses are consistent with this finding?

- A. Massive pleural effusion
- B. Massive pneumothorax
- C. Acute bronchial asthma
- D. Complete bronchial obstruction
- E. Mild bronchitis

Correct answers: A, B, D.

18.** A patient with chronic bronchitis presents with low-pitched, snoring respiratory sounds that partially disappear after coughing. Which statements are correct?

- A. These sounds are rhonchi
- B. They originate in large bronchi
- C. They are discontinuous sounds
- D. They may change after coughing
- E. They are caused by pleural inflammation

Correct answers: A, B, D.

19.** Fine crackles are heard at the end of inspiration at both lung bases in an elderly, bedridden patient. Which statements are correct?

- A. They may be due to reopening of collapsed alveoli
- B. They may be heard in early pneumonia
- C. They are continuous sounds
- D. They may be accentuated after coughing
- E. They are caused by pleural friction

Correct answers: A, B, D.

20.** A patient develops acute inspiratory distress with a loud sound heard over the neck. Which statements are correct?

- A. The sound is stridor
- B. It indicates upper airway obstruction
- C. It originates from the bronchioles
- D. It represents a potentially life-threatening condition
- E. It is usually benign and self-limited

Correct answers: A, B, D.

21.** A 9-year-old boy is examined during a routine visit. Breathing is predominantly abdominal. Which statements are correct regarding this finding?

- A. It is normal for this age group
- B. It represents diaphragmatic respiration
- C. It is pathological in children
- D. It may be more common in boys than girls at this age
- E. It excludes thoracic respiration in adulthood

Correct answers: A, B, D.

22.** During posterior chest inspection, the examiner focuses on thoracic topographic zones. Which statements are correct?

- A. The suprascapular zone corresponds to the supraspinous fossa
- B. The interscapulovertebral space belongs to the middle thoracic zone
- C. The subscapular zone corresponds to the lung apices
- D. Chauvet's alarm zone may indicate early pulmonary pathology
- E. Thoracic zones are used only for radiologic interpretation

Correct answers: A, B, D.

23.** A patient presents with dilated superficial veins over the upper chest and shoulders, associated with facial edema. Which statements are correct?

- A. This may suggest superior vena cava obstruction
- B. The finding may be associated with intrathoracic compression
- C. It is commonly seen in uncomplicated asthma
- D. Venous flow direction may be helpful during inspection
- E. The finding has no clinical relevance

Correct answers: A, B, D.

24.** Palpation reveals a hard, non-tender enlarged left supraclavicular lymph node. Which statements are correct?

- A. This is known as Virchow-Troisier node
- B. It may indicate gastric carcinoma
- C. It is typical for acute pneumonia
- D. It may be associated with lung cancer
- E. It is usually a benign, self-limited finding

Correct answers: A, B, D.

25.** A patient complains of localized chest pain. Palpation elicits pain in the parasternal and axillary regions. Which statements are correct?

- A. Valleix points may be involved
- B. Intercostal neuralgia should be considered
- C. The pain is always pleural in origin
- D. Palpation helps localize chest wall pain
- E. These points are unrelated to nerve pathways

Correct answers: A, B, D.

26.** During assessment of respiratory excursions, reduced apical expansion is noted on the left side. Which conditions could explain this finding?

- A. Apical fibrosis after tuberculosis
- B. Pleural thickening
- C. Upper lobe collapse
- D. Bilateral pulmonary emphysema
- E. Tumor infiltration of the upper lobe

Correct answers: A, B, C, E.

27.** Percussion of the posterior chest reveals reduced diaphragmatic excursion bilaterally. Which statements are correct?

- A. This may be seen in pulmonary fibrosis
- B. It may occur in pulmonary edema
- C. It is always a normal aging phenomenon
- D. It may be reduced in emphysema
- E. It cannot be assessed clinically

Correct answers: A, B, D.

28.** A patient with pleural effusion is examined. Auscultation reveals absent vesicular breath sounds over the affected area. Which statements are correct?

- A. Sound transmission is impaired
- B. Bronchial breath sounds are typically enhanced
- C. Massive effusion may abolish breath sounds
- D. This finding excludes pneumothorax
- E. Vesicular murmur may disappear completely

Correct answers: A, C, E.

29.** A patient with acute bronchospasm presents with predominantly expiratory musical sounds. Which statements are correct?

- A. These sounds are wheezes
- B. They are continuous sounds
- C. They are caused by airflow through narrowed bronchi
- D. They are best described as crackles
- E. They may be high-pitched

Correct answers: A, B, C, E.

30.** A patient with suspected pulmonary embolism presents with localized pleuritic pain and an added respiratory sound. Which statements are correct?

- A. The sound may be a pleural friction rub
- B. It may be heard during both inspiration and expiration
- C. It usually disappears after coughing
- D. It may be localized to the lower lateral chest
- E. It is produced by airflow through secretions

Correct answers: A, B, D.

31.** A patient with acute respiratory distress is observed using accessory muscles and presenting marked inspiratory intercostal retractions. Which statements are correct?

- A. This indicates increased inspiratory effort
- B. It suggests airway obstruction
- C. It is typical only for restrictive lung disease
- D. It reflects negative intrathoracic pressure during inspiration
- E. It is a normal finding during quiet breathing

Correct answers: A, B, D.

32.** Thoracic expansion measured at 6 cm in an adult patient is found to be symmetrical. Which statements are correct?

- A. This value is within normal limits
- B. Symmetry suggests absence of unilateral pathology
- C. This finding excludes restrictive lung disease
- D. Measurement has diagnostic value
- E. Expansion is assessed only at maximal inspiration

Correct answers: A, B, D.

33.** A patient presents with decreased tactile vocal fremitus over the right hemithorax. Which diagnoses are compatible with this finding?

- A. Pneumothorax
- B. Massive pleural effusion
- C. Lobar pneumonia with patent bronchus
- D. Pleural thickening
- E. Pulmonary consolidation adjacent to atelectasis

Correct answers: A, B, D.

34.** During Ruault's maneuver, asymmetric expansion of the supraclavicular fossae is observed. Which interpretations are correct?

- A. Apical lung expansion is reduced on one side
- B. Upper lobe pathology should be suspected
- C. This finding excludes pleural disease
- D. It may occur after pulmonary tuberculosis
- E. It has no clinical significance

Correct answers: A, B, D.

35.** While performing chest percussion, the examiner notes reduced resonance over a localized area. Which statements are correct?

- A. This suggests increased tissue density
- B. It may be found in pulmonary consolidation
- C. It excludes pleural effusion
- D. Percussion findings depend on chest wall thickness
- E. Percussion assesses airflow directly

Correct answers: A, B, D.

36.** A patient with suspected pleural effusion undergoes percussion examination. Which findings are expected?

- A. Dullness or flatness over the effusion
- B. Damoiseau's curve at the upper limit of fluid
- C. Tympanitic resonance below the fluid level
- D. Hyperresonance immediately above the effusion
- E. Normal resonance throughout the lung field

Correct answers: A, B, D.

37.** A patient with lobar pneumonia presents with abnormal breath sounds over the affected area. Which statements are correct?

- A. Bronchial breath sounds may be heard
- B. A patent bronchus is necessary for this finding
- C. Vesicular breath sounds are intensified
- D. These sounds indicate pulmonary consolidation
- E. This finding is normal in healthy adults

Correct answers: A, B, D.

38.** Auscultation reveals complete abolition of vesicular breath sounds over the left lung. Which conditions could explain this finding?

- A. Massive pleural effusion
- B. Massive pneumothorax
- C. Severe bronchial asthma attack
- D. Pulmonary fibrosis
- E. Mild acute bronchitis

Correct answers: A, B, C.

39.** A patient presents with coarse crackles that partially disappear after coughing. Which statements are correct?

- A. They may originate from large bronchi
- B. They are classified as continuous sounds
- C. They may be heard in bronchiectasis
- D. They may change after coughing
- E. They are caused by pleural surface friction

Correct answers: A, C, D.

40.** A patient with pleuritic chest pain presents with an added respiratory sound localized to the lower lateral thorax. Which statements are correct?

- A. The sound may be a pleural friction rub
- B. It is heard during both inspiration and expiration
- C. It disappears after coughing
- D. It may be associated with pulmonary embolism
- E. It is caused by airflow through narrowed bronchi

Correct answers: A, B, D.

Assertion-reason questions

All the questions from this paragraph will follow the standard format: A is an assertion, R is a reason. Options: A/B/C/D/E. You have to choose which option represents the correct answer:

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

1. **A:** The normal respiratory rate in a healthy adult at rest is 16–18 breaths per minute.

B: Under normal conditions, respiratory movements have a regular rhythm and constant amplitude.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: B.

2. **A:** Barrel chest is frequently associated with pulmonary emphysema.

R: Pulmonary emphysema leads to chronic lung hyperinflation and increased anteroposterior thoracic diameter.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A.

3. **A:** Rachitic chest is caused by vitamin C deficiency.
R: Vitamin D deficiency leads to defective bone mineralization and chest wall deformities.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: D.

4. **A:** Pectus excavatum may be associated with reduced vital capacity.
R: Depression of the sternum can compress the heart and lungs in severe cases.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A.

5. **A:** Inspiratory intercostal retractions indicate increased inspiratory effort.
R: They are caused by exaggerated negative intrathoracic pressure during inspiration.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A.

6. **A:** Tactile vocal fremitus is increased in lobar pneumonia with a patent bronchus.
R: Consolidated lung tissue transmits vocal vibrations more efficiently than normal aerated lung.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A.

7. **A:** Asymmetric chest expansion suggests unilateral pulmonary or pleural pathology.

R: In unilateral disease, the affected lung shows reduced respiratory excursion compared to the normal side.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A.

8. **A:** Damoiseau's curve represents the upper limit of pleural effusion on percussion.

R: Pleural fluid distributes evenly in the thoracic cavity regardless of gravity.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: C.

9. **A:** Bronchial breath sounds heard over peripheral lung fields suggest pulmonary consolidation.

R: Normal vesicular breath sounds are replaced when sound transmission through consolidated lung is enhanced.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A.

10. **A:** Pleural friction rub disappears after coughing.

R: Pleural friction rub is caused by airflow through bronchial secretions.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: E.

11. **A:** In adults, lower costal respiration predominates in men while awake.

R: Men have a greater contribution of diaphragmatic movement during quiet respiration.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A.

12. **A:** Chauvet's alarm zone has clinical importance in detecting early pulmonary pathology.

R: Pain or tenderness in this area may reflect pleural or pulmonary disease.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: **A.**

13. **A:** Expiratory bulging of intercostal spaces suggests air trapping.

R: Air trapping leads to increased intrathoracic pressure during expiration.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A.

14. **A:** Shawl-like edema of the upper chest may indicate superior vena cava obstruction.

R: Obstruction of venous return leads to venous congestion and edema in the upper body.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A.

15. **A:** In newborns, chest circumference is larger than head circumference.

R: The thorax grows faster than the skull in the neonatal period.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: E.

16. **A:** Thoracic expansion of 6 cm in an adult is considered normal.

R: Normal thoracic expansion in adults ranges between 5 and 7 cm.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A.

17. **A:** Deviation of the xiphoid process toward one side may suggest pleural effusion.

R: Accumulation of pleural fluid can displace thoracic structures toward the affected side.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A.

18. **A:** Tactile vocal fremitus is best perceived over areas covered by thick muscle.

R: Muscle tissue enhances transmission of vocal vibrations.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: D.

19. **A:** Reduced apical respiratory excursion may be seen after pulmonary tuberculosis.

R: Post-tuberculous fibrosis can limit upper lobe expansion.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A.

20. **A:** Percussion assesses the elasticity and air content of the pulmonary parenchyma.

R: Percussion vibrations penetrate deep enough to provide information about lung density.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A.

21. **A:** An increased anteroposterior diameter of the chest suggests chronic lung hyperinflation.

R: Chronic air trapping increases lung volume and remodels the thoracic cage over time.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A.

22. **A:** Asthenic chest is often associated with chronic pulmonary tuberculosis.

R: Chronic wasting diseases may lead to reduced thoracic musculature and altered chest shape.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A.

23. **A:** Harrison's sulcus is a sign of rickets.

R: Softening of the ribs and diaphragmatic traction deform the lower thoracic wall.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A.

24. **A:** Pectus excavatum is more frequent than pectus carinatum.

R: Pectus excavatum occurs approximately six times more often than pectus carinatum.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A.

25. **A:** Symmetrical inspiratory intercostal retractions indicate obstruction below the tracheal bifurcation.

R: Symmetrical findings usually reflect bilateral increased inspiratory effort.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: B.

26. **A:** Asymmetrical thoracic expansion suggests unilateral lung pathology.

R: Conditions such as pneumothorax or pleural effusion may restrict movement on one side.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A.

27. **A:** Tactile vocal fremitus is decreased in obesity.
R: Increased thickness of the chest wall reduces transmission of vocal vibrations.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A.

28. **A:** Percussion performed with excessive force improves detection of deep lung lesions.
R: Strong percussion increases vibration depth without affecting sound quality.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: E.

29. **A:** Vesicular breath sounds normally have a longer inspiratory phase than expiratory phase.
R: Airflow through terminal bronchioles and alveoli produces a soft, rustling sound.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: B.

30. **A:** Wheezes are usually more prominent during expiration.
R: Bronchial narrowing increases resistance to airflow, especially during expiratory phase.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A.

31. **A:** Bronchial breath sounds heard over peripheral lung fields indicate pulmonary consolidation.

R: Consolidated lung tissue transmits bronchial sounds more efficiently to the chest wall.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A.

32. **A:** Complete abolition of vesicular breath sounds suggests massive pleural effusion.

R: Pleural fluid acts as a barrier to sound transmission from the lung to the chest wall.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A.

33. **A:** Wheezes are classified as continuous respiratory sounds.

R: Wheezes are generated by airflow through narrowed bronchi producing musical vibrations.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A.

34. **A:** Crackles are discontinuous respiratory sounds.

R: Crackles result from sudden opening of small airways and alveoli during inspiration.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A.

35. **A:** Pleural friction rub may disappear when pleural effusion develops.

R: Separation of pleural surfaces by fluid prevents further friction during respiration.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A.

36. **A:** Stridor is best heard over the neck.

R: Stridor originates from obstruction of the upper airway structures.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A.

37. **A:** Tympanic percussion sound suggests increased air content in underlying structures.

R: Tympany is produced when percussion vibrations encounter a large air-filled cavity.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A.

38. **A:** Dullness on percussion over lung bases suggests pleural effusion.

R: Pleural fluid increases tissue density and reduces normal lung resonance.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A.

39. **A:** Lasegue's maneuver assesses basal lung expansion.
R: Thumb divergence reflects diaphragmatic descent during inspiration.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A.

40. **A:** Reduced thoracic expansion may be seen in ankylosing spondylitis.
R: Costovertebral joint involvement limits chest wall mobility.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A.

Difficult questions

1.* Percussion reveals dullness at the right lung base with a concave upper limit and a hyperresonant band immediately above it. The most accurate diagnosis is:

- A. Lobar pneumonia
- B. Pulmonary fibrosis
- C. Massive pneumothorax
- D. Pleural effusion with compressed lung
- E. Diaphragmatic paralysis

Correct answer: D.

2. Regarding tactile vocal fremitus, which statements are correct?

- A. It is increased in pulmonary consolidation with a patent bronchus
- B. It is decreased in pneumothorax
- C. It is absent in obesity
- D. It is increased in massive pleural effusion
- E. It depends on the thickness of the chest wall

Correct answers: A, B, E.

3.* Bronchial breath sounds heard over the peripheral lung field most strongly indicate:

- A. Pulmonary emphysema
- B. Bronchial asthma
- C. Pulmonary consolidation with patent bronchus
- D. Massive pleural effusion
- E. Pulmonary edema

Correct answer: C.

4. Regarding wheezes and rhonchi, which statements are correct?

- A. Wheezes are usually higher pitched than rhonchi
- B. Rhonchi originate mainly in large bronchi
- C. Wheezes are discontinuous sounds
- D. Both may change after coughing
- E. Both are caused by pleural surface friction

Correct answers: A, B, D.

5.* Marked asymmetric chest expansion with reduced movement on the left side most strongly suggests:

- A. Bilateral pulmonary emphysema
- B. Normal age-related change
- C. Left-sided pleural or pulmonary pathology
- D. Upper airway obstruction
- E. Anxiety-related hyperventilation

Correct answer: C.

6. Regarding percussion assessment of lung bases, which statements are correct?

- A. Lung bases normally descend during deep inspiration
- B. Reduced excursion may be seen in pulmonary fibrosis
- C. Normal excursion is approximately 1 cm
- D. Hertz maneuver assesses diaphragmatic excursion
- E. Reduced excursion may be bilateral in emphysema

Correct answers: A, B, E.

7.* A localized, scratchy sound heard during both inspiration and expiration that does not change after coughing is most consistent with:

- A. Coarse crackles
- B. Wheezes
- C. Pleural friction rub
- D. Amphoric breathing
- E. Stridor

Correct answer: C.

8. Regarding abolition of vesicular breath sounds, which statements are correct?

- A. It may be caused by massive pleural effusion
- B. It may be caused by massive pneumothorax
- C. It is typical in mild acute bronchitis
- D. It may be due to complete bronchial obstruction
- E. It is always bilateral

Correct answers: A, B, D.

9.* A harsh, high-pitched inspiratory sound best heard over the neck in an adult with acute dyspnea indicates:

- A. Wheezing
- B. Crackles
- C. Stridor
- D. Rhonchi
- E. Pleural friction rub

Correct answer: C.

10. Regarding severe chest wall deformities, which statements are correct?

- A. Pectus excavatum may reduce vital capacity
- B. Cardiac compression may occur in severe cases
- C. Thoracic expansion is always increased
- D. These deformities may be asymptomatic
- E. They have no impact on pulmonary mechanics

Correct answers: **A, B, D.**

11.* In a patient with fever and productive cough, examination shows increased tactile vocal fremitus and bronchial breath sounds over the right lower lung field. The most accurate interpretation is:

- A. Massive pleural effusion
- B. Pulmonary emphysema
- C. Lobar pneumonia with patent bronchus
- D. Acute bronchial asthma
- E. Pulmonary fibrosis

Correct answer: C.

12. Regarding severe airway obstruction with increased respiratory effort, which statements are correct?

- A. Inspiratory intercostal retractions may be present
- B. Accessory respiratory muscles may be recruited
- C. Wheezes are classified as discontinuous sounds
- D. Expiratory airflow limitation may be observed
- E. Thoracic expansion is always symmetrical

Correct answers: **A, B, D.**

13.* Percussion reveals bilateral hyperresonance with reduced diaphragmatic excursion. The most likely diagnosis is:

- A. Lobar pneumonia
- B. Massive pleural effusion
- C. Pulmonary fibrosis
- D. Pulmonary emphysema
- E. Pulmonary edema

Correct answer: D.

14. Regarding diaphragmatic excursion assessed by percussion, which statements are correct?

- A. It is evaluated during deep inspiration and expiration
- B. Normal excursion is approximately 6 cm
- C. Reduced excursion may be seen in emphysema
- D. It cannot be assessed clinically
- E. It may be reduced bilaterally in restrictive lung disease

Correct answers: A, C, E.

15.* A patient presents with pleuritic chest pain and a localized added respiratory sound that disappears when pleural effusion develops. The most accurate diagnosis is:

- A. Wheezes
- B. Crackles
- C. Pleural friction rub
- D. Stridor
- E. Amphoric breathing

Correct answer: C.

16. Regarding bronchial breath sounds, which statements are correct?

- A. They normally replace vesicular sounds over consolidated lung
- B. They require a patent bronchus to be transmitted
- C. They are normally heard over the peripheral lung fields
- D. They may be heard above pleural effusions
- E. They are abolished in pneumothorax

Correct answers: A, B, D.

17.* An increased anteroposterior chest diameter associated with reduced vital capacity most strongly suggests:

- A. Asthenic chest
- B. Rachitic chest
- C. Severe emphysema with chest wall remodeling
- D. Isolated pectus carinatum
- E. Normal aging

Correct answer: C.

18. Regarding thoracic expansion measurement, which statements are correct?

- A. Normal adult values range between 5-7 cm
- B. Asymmetry suggests unilateral pathology
- C. Expansion has no clinical relevance
- D. Reduced values may be seen in ankylosing spondylitis
- E. Measurement is performed only at maximal expiration

Correct answers: A, B, D.

19.* A patient with bronchiectasis presents with coarse crackles that change after coughing. The most accurate interpretation is:

- A. Pleural friction rub
- B. Fine inspiratory crackles
- C. Airflow through secretions in dilated bronchi
- D. Upper airway obstruction
- E. Normal vesicular breathing

Correct answer: C.

20. Regarding stridor in adults, which statements are correct?

- A. It is best heard over the neck
- B. It suggests upper airway obstruction
- C. It is usually benign and self-limited
- D. It represents a potential emergency
- E. It originates from the alveoli

Correct answers: A, B, D.

21.* A patient has decreased tactile vocal fremitus and abolished vesicular breath sounds over the right hemithorax. The most accurate single diagnosis is:

- A. Lobar pneumonia with patent bronchus
- B. Pulmonary fibrosis
- C. Acute bronchial asthma
- D. Massive pleural effusion
- E. Early pulmonary edema

Correct answer: D.

22. Regarding pleural effusion and its physical signs, which statements are correct?

- A. Dullness/flatness is expected over the fluid
- B. Damoiseau's curve corresponds to the upper limit of the effusion
- C. Skoda's resonance may be found immediately above the effusion
- D. Vesicular breath sounds are typically intensified over the effusion
- E. Breath sounds may be abolished over the effusion

Correct answers: A, B, C, E.

23.* A patient presents with visible inspiratory intercostal retractions and widespread wheezing. The single best interpretation is:

- A. Massive pleural effusion
- B. Pulmonary fibrosis
- C. Severe airway obstruction with increased inspiratory effort
- D. Pneumothorax with mediastinal shift
- E. Isolated chest wall pain syndrome

Correct answer: C.

24. Regarding normal and abnormal distribution of breath sounds, which statements are correct?

- A. Vesicular breath sounds are normally absent over the trachea
- B. Tracheobronchial sounds are normally heard over the trachea and main bronchi
- C. Bronchial breath sounds over peripheral lung fields suggest consolidation
- D. Vesicular sounds normally have a longer inspiratory than expiratory phase
- E. Bronchial sounds are a normal finding over the lung bases posteriorly

Correct answers: A, B, C, D.

25.* A patient has pleuritic chest pain and a localized scratchy sound heard in both phases of respiration that does not change after coughing. The most accurate diagnosis is:

- A. Wheezing
- B. Coarse crackles
- C. Stridor
- D. Pleural friction rub
- E. Amphoric breathing

Correct answer: D.

26. Regarding wheezes, rhonchi, and crackles, which statements are correct?

- A. Wheezes are typically high-pitched and musical
- B. Rhonchi are typically low-pitched and may change after coughing
- C. Crackles are classified as discontinuous sounds
- D. Pleural friction rub is generated by airflow through narrowed bronchi
- E. Wheezes and rhonchi are generally classified as continuous sounds

Correct answers: A, B, C, E.

27.* During percussion, the examiner finds a tympanic note over a limited area of the thorax. The single best interpretation is:

- A. Consolidation
- B. Pleural effusion
- C. Large air-containing space close to the chest wall
- D. Diffuse interstitial fibrosis
- E. Obesity-related sound attenuation

Correct answer: C.

28. Regarding the assessment of respiratory excursions (expansion and base excursion), which statements are correct?

- A. Normal thoracic expansion in adults is approximately 5-7 cm
- B. Asymmetry of expansion suggests unilateral pathology
- C. Pulmonary base excursion between forced expiration and deep inspiration is about 20 cm
- D. Lasegue's maneuver evaluates basal lung expansion
- E. Reduced diaphragmatic excursion may be seen in emphysema

Correct answers: A, B, D, E.

29.* A patient shows increased tactile vocal fremitus and bronchial breath sounds over the left lower lung field. The single best diagnosis is:

- A. Massive pneumothorax
- B. Massive pleural effusion
- C. Pulmonary emphysema
- D. Pulmonary consolidation with patent bronchus (e.g., lobar pneumonia)
- E. Simple acute bronchitis

Correct answer: D.

30. Regarding severe chest wall deformity and its functional impact, which statements are correct?

- A. Pectus excavatum may be associated with reduced vital capacity
- B. Severe deformities may alter respiratory mechanics and increase work of breathing
- C. Thoracic expansion is always increased in chest wall deformities
- D. Some patients may be minimally symptomatic despite deformity
- E. Chest wall deformities have no potential effect on cardiopulmonary function

Correct answers: A, B, D.

31.* Percussion shows flatness over the left lung base, a concave upper limit, and diminished breath sounds on auscultation. The single best diagnosis is:

- A. Lobar pneumonia
- B. Pulmonary fibrosis
- C. Pleural effusion
- D. Pulmonary emphysema
- E. Acute bronchitis

Correct answer: C.

32. Regarding factors influencing tactile vocal fremitus, which statements are correct?

- A. Increased lung density enhances transmission of vocal vibrations
- B. Thick chest wall tissues reduce fremitus perception
- C. Fremitus is increased in pneumothorax
- D. Fremitus depends on the patency of the bronchial tree
- E. Fremitus is independent of lung aeration

Correct answers: A, B, D.

33.* Bronchial breath sounds are auscultated over the right upper lung field in an adult with fever. The most accurate interpretation is:

- A. Normal anatomical finding
- B. Pulmonary emphysema
- C. Pulmonary consolidation with patent bronchus
- D. Massive pleural effusion
- E. Acute bronchial asthma

Correct answer: C.

34. Regarding the differentiation of added respiratory sounds, which statements are correct?

- A. Wheezes are continuous, musical sounds
- B. Crackles are caused by pleural surface friction
- C. Rhonchi are often low-pitched and may change after coughing
- D. Pleural friction rub is typically localized
- E. Crackles are usually influenced by body position only

Correct answers: A, C, D.

35.* During inspection and palpation, asymmetric chest expansion with reduced right-sided movement is observed. The single best interpretation is:

- A. Bilateral pulmonary emphysema
- B. Normal physiological variant
- C. Right-sided pleural or pulmonary pathology
- D. Anxiety-related hyperventilation
- E. Upper airway obstruction

Correct answer: C.

36. Regarding percussion assessment of diaphragmatic excursion, which statements are correct?

- A. It is measured between forced expiration and deep inspiration
- B. Normal excursion is approximately 6 cm
- C. Reduced excursion may occur in pleural effusion
- D. It is increased in pulmonary fibrosis
- E. Bilateral reduction may be seen in emphysema

Correct answers: A, B, C, E.

37.* A scratchy sound heard during both inspiration and expiration, unchanged by coughing, is best explained by:

- A. Wheezes
- B. Crackles
- C. Stridor
- D. Pleural friction rub
- E. Amphoric breathing

Correct answer: D.

38. Regarding conditions associated with abolition of vesicular breath sounds, which statements are correct?

- A. Massive pleural effusion may cause this finding
- B. Massive pneumothorax may cause this finding
- C. Mild bronchitis commonly causes this finding
- D. Complete bronchial obstruction may cause this finding
- E. It always indicates bilateral lung disease

Correct answers: A, B, D.

39.* A harsh inspiratory sound best heard over the neck, accompanied by respiratory distress, most strongly suggests:

- A. Wheezing
- B. Crackles
- C. Stridor
- D. Rhonchi
- E. Pleural friction rub

Correct answer: C.

40. Regarding severe thoracic deformities and their functional consequences, which statements are correct?

- A. They may reduce lung volumes
- B. They may increase the work of breathing
- C. Thoracic expansion is invariably increased
- D. Some patients may remain asymptomatic
- E. Cardiopulmonary function is never affected

Correct answers: A, B, D.

Chapter V. Respiratory system diagnostic tests

Ariana Violeta Nicoras, Ciprian Ilie Rosca

Mixed questions

1. A 60-year-old smoker with chronic cough and exertional dyspnea undergoes chest X-ray after an inconclusive auscultation. The radiograph reveals a left perihilar mass. Which role of paraclinical evaluation does this most clearly illustrate?

- A. Confirming functional impairment
- B. Monitoring therapy
- C. Detecting abnormalities missed on physical exam
- D. Grading severity of airway obstruction
- E. Excluding systemic involvement

Correct answer: C

2. A 45-year-old man with fever and pleuritic chest pain has almost normal auscultation despite obvious respiratory discomfort. Imaging later demonstrates a segmental pneumonia. This best represents which phenomenon?

- A. Overreliance on imaging
- B. Silent pneumonia
- C. Misinterpretation of breath sounds
- D. Hyperinflated lung artifact
- E. Normal variant of auscultation

Correct answer: B

3. A patient with known COPD undergoes spirometry to assess response to bronchodilator therapy. Which purpose of paraclinical testing does this exemplify?

- A. Screening silent lung cancer
- B. Confirming diagnostic suspicion
- C. Monitoring disease evolution
- D. Detecting complications
- E. Evaluating mucociliary clearance

Correct answer: C

4. A 28-year-old woman presents with persistent wheezing unresponsive to therapy. Her lung ultrasound shows B-lines at the bases, suggesting early interstitial involvement. This supports which concept from the lecture?

- A. Clinical findings always outweigh imaging
- B. Screening eliminates the need for auscultation
- C. The "stethoscope" and the "screen" complement each other
- D. Imaging should only be used for severe cases
- E. Paraclinical methods are superior to physical examination

Correct answer: C

5. A 53-year-old man with chronic dyspnea has normal auscultation but reduced diffusing capacity (DLCO). Which statement best fits this scenario?

- A. Normal auscultation rules out lung pathology
- B. Paraclinical assessment refines the clinical picture
- C. Imaging is unnecessary when auscultation is normal
- D. DLCO is unreliable and nonspecific
- E. Clinical signs always precede functional impairment

Correct answer: B

6. Choose the true statement:

- A. Excess pleural fluid can be drained by paracentesis.
- B. At least 2 L can be removed without complications.
- C. The difference between transudate and exudate is based on glucose.
- D. A local complication can be cardiorespiratory arrest.
- E. The exudate can be hemorrhagic.

Correct answer: E.

7. The main purpose of paraclinical respiratory investigations is to:

- A. Replace physical examination
- B. Establish diagnosis without clinical data
- C. Confirm and quantify clinical hypotheses
- D. Eliminate the need for follow-up
- E. Detect disease only in symptomatic patients

Correct answer: C.

8. Which structure appears the darkest on a chest X-ray?

- A. Bone
- B. Soft tissue
- C. Fluid
- D. Air
- E. Calcium

Correct answer: D.

9. In a technically adequate PA chest X-ray, which posterior rib should be visible?

- A. 6th
- B. 7th
- C. 8th
- D. 9th
- E. 10th

Correct answer: E.

10. In the PA projection, cardiac size appears normal because:

- A. The patient is supine
- B. The beam is horizontal
- C. The source-detector distance is maximal
- D. The beam passes anterior to posterior
- E. Lung inflation is reduced

Correct answer: C.

11. Which rib is more easily visible on chest radiography?

- A. Anterior rib
- B. Costal cartilage
- C. Posterior rib
- D. Floating rib
- E. Cervical rib

Correct answer: C.

12. A pulmonary opacity of supracostal intensity means:

- A. Vessels are still visible
- B. Density is similar to fat
- C. Density equals mediastinal structures
- D. The opacity is always malignant
- E. It is caused by technical error

Correct answer: C.

13. Which feature suggests a false pulmonary veiling?

- A. Early pneumonia
- B. Pleural effusion
- C. Breast shadow
- D. Pulmonary congestion
- E. Atelectasis

Correct answer: C.

14. A micronodular pulmonary pattern is defined by nodules measuring:

- A. <1 mm
- B. 1-3 mm
- C. 3-5 mm
- D. 5-10 mm
- E. >10 mm

Correct answer: B.

15. Which spirometric parameter best reflects airway patency?

- A. TLC
- B. RV
- C. FVC
- D. FEV₁
- E. IC

Correct answer: D.

16. A spirometry quality grade "F" means:

- A. Optimal test
- B. Acceptable test
- C. Questionable accuracy
- D. Non-repeatable but usable
- E. Invalid test

Correct answer: E.

17. Which preparation is required before spirometry?

- A. Heavy meal
- B. Smoking immediately before
- C. Alcohol intake
- D. Bronchodilator washout
- E. Supine positioning

Correct answer: D.

18. Which condition is an absolute contraindication to spirometry?

- A. Pregnancy
- B. Recent pneumothorax
- C. Severe glaucoma
- D. Confusion
- E. Obesity

Correct answer: B.

19. Residual volume normally represents approximately:

- A. 500 mL
- B. 800 mL
- C. 1100 mL
- D. 1200 mL
- E. 2300 mL

Correct answer: D.

20. A decrease in TLC is characteristic of:

- A. Obstructive syndrome
- B. Emphysema
- C. Restrictive syndrome
- D. Asthma attack
- E. Hyperinflation

Correct answer: C.

21. The Empey index is used to detect:

- A. Restrictive disease
- B. Small airway obstruction
- C. Upper airway obstruction
- D. Alveolar disease
- E. Pulmonary embolism

Correct answer: C.

22. Normal arterial blood pH ranges between:

- A. 7.20-7.30
- B. 7.30-7.40
- C. 7.35-7.45
- D. 7.40-7.50
- E. 7.45-7.55

Correct answer: C.

23. Respiratory acidosis is primarily caused by:

- A. Excess bicarbonate loss
- B. Hyperventilation
- C. Impaired CO₂ elimination
- D. Renal failure
- E. Metabolic acid production

Correct answer: C.

24. In chronic respiratory acidosis, the main respiratory drive is:

- A. CO₂
- B. Oxygen
- C. pH
- D. Lactate
- E. Temperature

Correct answer: B.

25. Respiratory alkalosis is caused by:

- A. Hypoventilation
- B. CO₂ retention
- C. Hyperventilation
- D. Renal bicarbonate loss
- E. Acid accumulation

Correct answer: C.

26. Which electrolyte abnormality is typical in respiratory alkalosis?

- A. Hyperkalemia
- B. Hypercalcemia
- C. Hypokalemia
- D. Hypernatremia
- E. Hypermagnesemia

Correct answer: C.

27. PET-CT detects lesions based on:

- A. Density differences
- B. Blood flow
- C. Metabolic activity
- D. Air content
- E. Elastic recoil

Correct answer: C.

28. Sputum is defined as:

- A. Any oral secretion
- B. A physiological lung fluid
- C. A pathological product expelled by coughing
- D. Saliva mixed with mucus
- E. A pleural exudate

Correct answer: C.

29. Charcot-Leyden crystals are associated with:

- A. Tuberculosis
- B. Lung cancer
- C. Asthma
- D. Pneumonia
- E. Bronchiectasis

Correct answer: C.

30. Thoracentesis is primarily used to:

- A. Diagnose pneumothorax
- B. Obtain pleural tissue
- C. Evacuate pleural fluid
- D. Measure lung volumes
- E. Administer oxygen

Correct answer: C.

31. The safest puncture site for thoracentesis is:

- A. Lower edge of the rib
- B. Middle of intercostal space
- C. Upper edge of the inferior rib
- D. Costochondral junction
- E. Parasternal line

Correct answer: C.

32. Maximum pleural fluid evacuation per procedure should not exceed:

- A. 500 mL
- B. 800 mL
- C. 1000 mL
- D. 2000 mL
- E. No limit

Correct answer: C.

33. A pleural fluid pH <7.1 indicates:

- A. Transudate
- B. Viral infection
- C. Need for drainage
- D. Cardiac failure
- E. Benign effusion

Correct answer: C.

34. Lung ultrasound cannot directly visualize lung parenchyma because of:

- A. Bone interference
- B. Fluid overload
- C. High air content
- D. Low frequency probes
- E. Cardiac motion

Correct answer: C.

35. A-lines on lung ultrasound indicate:

- A. Pulmonary edema
- B. Consolidation
- C. Normal aeration
- D. Pleural effusion
- E. Fibrosis

Correct answer: C.

36. Bronchoscopy allows visualization of all EXCEPT:

- A. Larynx
- B. Trachea
- C. Bronchi
- D. Alveoli
- E. Bronchial tumors

Correct answer: D.

37. After bronchoscopy, the patient must be monitored for:

- A. Hyperglycemia
- B. Polyuria
- C. Hemoptysis
- D. Constipation
- E. Hypertension only

Correct answer: C.

38. Pulse oximetry estimates:

- A. PaO_2
- B. PaCO_2
- C. Hemoglobin concentration
- D. Oxygen saturation
- E. Blood pH

Correct answer: D.

39. Pulse oximetry is considered:

- A. Invasive
- B. Operator-dependent only
- C. Non-invasive
- D. Radiating
- E. Unreliable

Correct answer: C.

40. Arterial blood gas analysis requires blood sampling from:

- A. Any vein
- B. Capillary bed
- C. Radial artery
- D. Pulmonary vein
- E. Jugular vein

Correct answer: C.

Progressive questions

1. The following statements are true about spirometry:

- A. FEV₃ / FEV₆: Volume exhaled in the first 3 or 6 seconds of forced expiration.
- B. FAT-Maximal instantaneous flow when X % of FVC remains to be exhaled.
- C. A cause of decreased vital capacity can be muscular atrophy.
- D. A cause of decreased vital capacity can be pregnancy.
- E. Total lung capacity can be moderately decreased <40%.

Correct answers: A, C, D

2. In the arterial blood sample you can see:

- A. pH-partial pressure of oxygen
- B. HCO₃⁻ -actual, standard, and buffer base.
- C. PaO₂ -partial pressure of carbon dioxide.
- D. BE-excess or deficit of buffer base
- E. Acidosis is pH >7.35.

Correct answers: B, D.

3. Respiratory acidosis:

- A. Occurs when pH<7.35
- B. Occurs when CO₂ is not eliminated properly due to decreased pulmonary ventilation.
- C. Can be caused by an asthma attack.
- D. Cannot reach coma
- E. In chronic and acute forms the same methods are applied quickly.

Correct answers: A, B, C.

4. Respiratory acidosis:

- A. Acute form is identical to the chronic form.
- B. In chronic form hypoxic stimulus is essential.
- C. In acute form hypoxic stimulus is essential.
- D. What is beneficial in the acute form can be fatal in the chronic form.
- E. Chronic respiratory acidosis is signs of chronic myocardial ischemia

Correct answers: B, D, E.

5. Respiratory alkalosis:

- A. Occurs at a PH>7.35
- B. Can occur in panic attack
- C. Can occur in fever.
- D. Occurs by hypoventilation.
- E. Can occur as compensation in metabolic acidosis.

Correct answers: A, B, C, E.

6. Respiratory alkalosis:

- A. May cause angina pectoris.
- B. Hypotension.
- C. Hypokalemia.
- D. Cerebral vasoconstriction
- E. May not progress to coma.

Correct answers: A, C, D.

7. Choose the true statements:

- A. PET-CT combines CT imaging with intravenous injection of radioactively labeled glucose, areas of increased metabolic activity appear clearly visible
- B. Pulmonary embolism cannot be seen.
- C. Metastases cannot be seen.
- D. Metastases can be seen.
- E. It is not irradiating.

Correct answers: A, D.

8. On examination of sputum:

- A. Inflammatory exudate may occur in pneumonia.
- B. Alveolar transudate may occur in pneumonia.
- C. If the patient cannot cough, aspiration is performed.
- D. Fibrin filaments may occur in asthma.
- E. Parasitic elements may not occur.

Correct answers: A, C, D.

9. Bronchoscopy:

- A. Tumors can be resected.
- B. Biopsies cannot be taken.
- C. Adrenaline is administered to reduce the coughing effect.
- D. After the procedure, the patient may experience hemoptysis.
- E. After the procedure, the patient may experience cardiac arrhythmias

Correct answers: A, D, E.

10. Regarding chest radiography, choose the correct statements:

- A. It is a non-invasive diagnostic method
- B. It uses Roentgen radiation
- C. It provides functional lung data
- D. It visualizes lungs, heart, aorta, and thoracic bones
- E. It always detects early interstitial disease

Correct answers: A, B, D.

11. In a correct PA chest X-ray, which conditions must be fulfilled?

- A. Forced inspiration
- B. Breath holding
- C. Supine position
- D. Chin raised
- E. Shoulders rolled forward

Correct answers: A, B, D, E.

12. Compared with PA projection, AP chest radiography is associated with:

- A. Apparent cardiac enlargement
- B. Shorter source-detector distance
- C. Better visualization of pleural effusions
- D. Increased image distortion
- E. More accurate heart size assessment

Correct answers: A, B, D.

13. Posterior ribs on chest X-ray have which characteristics?

- A. More visible than anterior ribs
- B. Horizontally oriented
- C. Attached to the sternum
- D. Attached to thoracic vertebrae
- E. Poorly visible

Correct answers: A, B, D.

14. Which structures absorb the largest amount of X-rays?

- A. Air
- B. Fat
- C. Soft tissue
- D. Calcium
- E. Metal

Correct answers: D, E.

15. True pulmonary veiling may be caused by:

- A. Early pneumonia
- B. Pleural effusion
- C. Breast shadows
- D. Pulmonary congestion
- E. Pachypleuritis

Correct answers: A, B, D, E.

16. False pulmonary veiling may be produced by:

- A. Hypertrophied pectoral muscles
- B. Obesity
- C. Early atelectasis
- D. Breast shadows
- E. Chest wall tumors

Correct answers: A, B, D, E.

17. Pulmonary opacities must be described according to:

- A. Location
- B. Shape
- C. Color
- D. Margins
- E. Internal structure

Correct answers: A, B, D, E.

18. Micronodular pulmonary opacities are characteristic of:

- A. Miliary tuberculosis
- B. Pneumoconiosis
- C. Mitral stenosis
- D. Pulmonary embolism
- E. Hemosiderosis

Correct answers: A, B, C, E.

19. The following affirmations regardind respiratory alkalosis are not true:

- A. May cause angina pectoris.
- B. Hypotension.
- C. Hypokalemia.
- D. Cerebral vasoconstriction
- E. May not progress to coma.

Correct answers: B, E.

20. Acceptability criteria for spirometry include:

- A. No coughing during expiration
- B. Open glottis
- C. Expiration ≥ 6 seconds
- D. Presence of artefacts
- E. No additional inspiration

Correct answers: A, B, C, E.

21. Spirometry is useful for:

- A. Screening individuals at risk
- B. Preoperative evaluation
- C. Diagnosing pulmonary embolism
- D. Monitoring disease progression
- E. Assessing treatment response

Correct answers: A, B, D, E.

22. Contraindications to spirometry include:

- A. Active tuberculosis
- B. Recent pneumothorax
- C. Severe glaucoma
- D. Stable hypertension
- E. Recent myocardial infarction

Correct answers: A, B, C, E.

23. Vital capacity may be decreased in:

- A. Myasthenia gravis
- B. Kyphoscoliosis
- C. Pregnancy
- D. Pneumonia
- E. Emphysema

Correct answers: A, B, C, D.

24. Residual volume is increased in:

- A. Emphysema
- B. Bronchial asthma
- C. COPD
- D. Atelectasis
- E. Kyphosis

Correct answers: A, B, C, E.

25. A decreased FEV₁/FVC ratio suggests:

- A. Obstructive syndrome
- B. Restrictive syndrome
- C. COPD
- D. Bronchial asthma
- E. Tracheal stenosis

Correct answers: A, C, D, E.

26. Increased FEV₁/FVC ratio may be seen in:

- A. Interstitial lung disease
- B. Increased elastic recoil
- C. Emphysema
- D. Alveolar disease
- E. Advanced COPD

Correct answers: A, B, D.

27. Arterial blood gas analysis provides information on:

- A. pH
- B. PaO₂
- C. PaCO₂
- D. Hemoglobin concentration
- E. Bicarbonate levels

Correct answers: A, B, C, E.

28. Respiratory acidosis may be caused by:

- A. Opioid intoxication
- B. Severe pneumonia
- C. Asthma attack
- D. Pulmonary embolism
- E. Hyperventilation

Correct answers: A, B, C, D.

29. Chronic respiratory acidosis may present with:

- A. Near-normal respiratory rate
- B. Cyanosis
- C. Hyperkalemia
- D. CO₂-induced vasodilation
- E. Metabolic alkalosis

Correct answers: A, B, C, D.

30. Respiratory alkalosis may result from:

- A. Panic attack
- B. Fever
- C. Thyrotoxicosis
- D. Hypoventilation
- E. Mechanical overventilation

Correct answers: A, B, C, E.

31. Pathophysiological effects of respiratory alkalosis include:

- A. Cerebral vasoconstriction
- B. Pulmonary vasodilation
- C. Hypocalcemia
- D. Hyperkalemia
- E. Tetany

Correct answers: A, B, C, E.

32. CT of the chest allows visualization of:

- A. Pulmonary parenchyma
- B. Pleura
- C. Mediastinal structures
- D. Pulmonary circulation without contrast
- E. Musculoskeletal structures

Correct answers: A, B, C, E.

33. PET-CT is useful for detecting:

- A. Primary tumors
- B. Metastases
- C. Areas of increased metabolism
- D. Air trapping
- E. Small lesions

Correct answers: A, B, C, E.

34. Sputum microscopic examination may reveal:

- A. Alveolar macrophages
- B. Charcot-Leyden crystals
- C. Curschmann spirals
- D. Elastic fibers
- E. Mesothelial cells

Correct answers: A, B, C, D.

35. Pleural effusion is classified as exudate when:

- A. Protein >3 g/dL
- B. Pleural/serum protein ratio >0.5
- C. LDH pleural/serum ratio >0.6
- D. Density <1015
- E. ADA >50 µg/L

Correct answers: A, B, C, E.

36. Thoracentesis complications include:

- A. Pneumothorax
- B. Hemothorax
- C. Pleural shock
- D. Acute pulmonary edema
- E. Hypertension

Correct answers: A, B, C, D. (

37. Lung ultrasound is based on:

- A. Analysis of artifacts
- B. Direct visualization of alveoli
- C. Pleural line assessment
- D. A-lines and B-lines
- E. Reflection of ultrasound waves

Correct answers: A, C, D, E.

38. B-lines on lung ultrasound indicate:

- A. Normal aeration
- B. Interstitial involvement
- C. Pulmonary edema
- D. Pneumonia
- E. Presence of fluid and air coexistence

Correct answers: B, C, D, E.

39. Bronchoscopy allows:

- A. Visualization of bronchi
- B. Tumor resection
- C. Foreign body extraction
- D. Cytological sampling
- E. Assessment of alveoli

Correct answers: A, B, C, D.

40. Pulse oximetry:

- A. Is non-invasive
- B. Estimates arterial oxygen saturation
- C. Measures PaO_2 directly
- D. Can be applied to finger or earlobe
- E. Uses ionizing radiation

Correct answers: A, B, D.

Advanced clinical vignettes

1.** A 72-year-old woman with severe kyphoscoliosis presents with chronic hypoxemia. Her physical exam is limited by restricted chest wall movement. Which paraclinical investigations are appropriate to complete her diagnostic assessment? (Select all that apply.)

- A. Spirometry
- B. Pulmonary function tests including lung volumes
- C. Chest X-ray
- D. Sputum cytology
- E. Arterial blood gas analysis

Correct answers: A, B, C, E.

2.** A 39-year-old patient with recurrent pulmonary emboli has normal auscultation but presents with sudden pleuritic pain and mild hypoxemia. Which complementary investigations are justified? (Select all that apply.)

- A. CT pulmonary angiography
- B. D-dimer testing
- C. Chest ultrasound
- D. Lung biopsy
- E. MRI of the chest

Correct answers: A, B, C.

3.** A young patient with suspected interstitial lung disease has crackles on auscultation, but the extent of involvement is unclear. Which paraclinical tests help evaluate the structural lung changes? (Select all that apply.)

- A. High-resolution CT scan
- B. Lung ultrasound (B-lines)
- C. Spirometry alone
- D. Chest X-ray
- E. Diffusing capacity (DLCO)

Correct answers: A, B, D, E.

4.** A 55-year-old man with chronic cough presents with a new episode of hemoptysis. Auscultation is largely normal. Which investigations are justified to *detect conditions that auscultation may miss?* (Select all that apply.)

- A. Chest CT scan
- B. Bronchoscopy
- C. Pulmonary angiography
- D. Needle lung biopsy as first choice
- E. Chest X-ray

Correct answers: A, B, C, E.

5.** A 64-year-old man with long-standing smoking history has progressive dyspnea. Auscultation reveals only faint wheezes. To *quantify functional impairment*, which investigations are essential? (Select all that apply.)

- A. Spirometry with bronchodilator test
- B. DLCO measurement
- C. Peak expiratory flow monitoring
- D. Echocardiography
- E. 6-minute walk test

Correct answers: A, B, E.

6.** A 65-year-old man presents with fever, productive cough, and dyspnea. Chest X-ray shows a homogeneous opacity in the right lower lung field with obscuration of the costophrenic angle. Which statements are correct?

- A. The opacity may represent pleural effusion
- B. The opacity density is likely supracostal
- C. Mediastinal shift may occur
- D. Lung ultrasound would show A-lines only
- E. Thoracentesis may be indicated

Correct answers: A, C, E.

7.** A supine, critically ill patient undergoes chest radiography. The heart appears enlarged and pleural effusions are difficult to detect. Which explanations are correct?

- A. AP projection causes cardiac magnification
- B. Supine position redistributes pleural fluid posteriorly
- C. Source-detector distance is shorter
- D. PA projection was used
- E. Image distortion is minimal

Correct answers: A, B, C.

8.** A chest X-ray reveals bilateral micronodular opacities (1-3 mm), evenly distributed.

Which conditions should be considered?

- A. Miliary tuberculosis
- B. Pneumoconiosis
- C. Mitral stenosis
- D. Pulmonary embolism
- E. Hemosiderosis

Correct answers: A, B, C, E.

9.** A young woman's chest X-ray shows diffuse decreased transparency, but CT is normal. She has marked pectoral musculature.

Which statements are correct?

- A. This represents false pulmonary veiling
- B. Obesity may cause similar findings
- C. Early pneumonia is excluded
- D. Breast shadows may contribute
- E. It is always pathological

Correct answers: A, B, D.

10.** A patient presents with dyspnea. Chest X-ray shows a round, homogeneous, well-defined opacity of costal intensity in the right lung.

Which descriptions are correct?

- A. The opacity is homogeneous
- B. Margins are sharp
- C. Density equals mediastinal structures
- D. The lesion must be malignant
- E. Size measurement is required

Correct answers: A, B, C, E.

11.** A 58-year-old smoker with chronic cough undergoes spirometry: $FEV_1 \downarrow$, $FEV_1/FVC \downarrow$, TLC normal.

Which conclusions are correct?

- A. Obstructive ventilatory dysfunction
- B. Restrictive syndrome
- C. COPD is possible
- D. RV may be increased
- E. $FEF_{25-75\%}$ may be decreased

Correct answers: A, C, D, E.

12.** A spirometry test shows poor reproducibility, coughing during expiration, and early termination.

Which statements are correct?

- A. FEV₁ accuracy is affected
- B. Test quality grade may be D or F
- C. The test is optimal
- D. The test may be invalid clinically
- E. Expiration time is inadequate

Correct answers: A, B, D, E.

13.** A patient with kyphoscoliosis presents with reduced vital capacity and normal FEV₁/FVC ratio.

Which statements are correct?

- A. Restrictive ventilatory pattern
- B. Thoracic cause of decreased VC
- C. Increased TLC is expected
- D. RV may be normal or decreased
- E. Obstructive syndrome is present

Correct answers: A, B, D.

14.** A patient with emphysema undergoes lung function testing.

Which findings are expected?

- A. Increased residual volume
- B. Decreased elastic recoil
- C. Increased TLC
- D. Decreased FEV₁/FVC
- E. Decreased RV

Correct answers: A, B, C, D.

15.** A spirometry test shows Empey index ≥ 8 .

Which interpretations are correct?

- A. Upper airway obstruction
- B. Fixed airway obstruction possible
- C. Small airway disease only
- D. Further evaluation is needed
- E. Normal spirometry

Correct answers: A, B, D.

16.** A patient with COPD presents with headache, confusion, and pink skin. ABG shows pH 7.34, PaCO_2 58 mmHg.

Which statements are correct?

- A. Respiratory acidosis is present
- B. Chronic form is likely
- C. CO_2 -induced vasodilation explains skin color
- D. Hyperventilation is the cause
- E. Hypoxic respiratory drive may be present

Correct answers: A, B, C, E.

17.** A patient presents after opioid overdose. ABG shows elevated PaCO_2 and decreased pH.

Which mechanisms are involved?

- A. Central respiratory depression
- B. Decreased pulmonary ventilation
- C. Increased CO_2 elimination
- D. Respiratory acidosis
- E. Renal bicarbonate loss

Correct answers: A, B, D.

18.** A patient with severe pneumonia develops lethargy and later coma.

Which statements are correct?

- A. Respiratory acidosis may progress to coma
- B. Hypoxemia may coexist
- C. ABG analysis is essential
- D. This cannot occur in acute forms
- E. CO_2 retention is involved

Correct answers: A, B, C, E.

19.** A patient hyperventilates during a panic attack.

Which ABG and clinical changes are expected?

- A. Decreased PaCO_2
- B. Increased blood pH
- C. Cerebral vasoconstriction
- D. Hypokalemia
- E. Hypercapnia

Correct answers: A, B, C, D.

20.** A patient with metabolic acidosis develops compensatory hyperventilation.

Which statements are correct?

- A. Respiratory alkalosis is present
- B. PaCO_2 decreases
- C. This is an appropriate compensation
- D. Hypoventilation occurs
- E. pH normalizes immediately

Correct answers: A, B, C.

21.** A patient with suspected lung cancer undergoes PET-CT.

Which findings support malignancy?

- A. Increased glucose uptake
- B. Detection of metastases
- C. Increased tissue density only
- D. Visualization of small lesions
- E. Metabolic activity mapping

Correct answers: A, B, D, E.

22.** A patient produces purulent sputum with fever.

Which findings support bacterial infection?

- A. Neutrophils on microscopy
- B. Positive Gram stain
- C. Charcot-Leyden crystals
- D. Elevated leukocyte count
- E. Fibrin filaments

Correct answers: A, B, D.

23.** A sputum sample reveals hemosiderin-laden macrophages.

Which condition is suggested?

- A. Heart failure
- B. Asthma
- C. Pulmonary hemorrhage
- D. Pulmonary embolism
- E. Lipid pneumonia

Correct answers: A, C.

24.** A patient with pleural effusion undergoes thoracentesis. Which findings suggest an exudate?

- A. Protein >3 g/dL
- B. Pleural/serum protein ratio >0.5
- C. ADA >50 μ g/L
- D. Density <1015
- E. LDH pleural/serum ratio >0.6

Correct answers: A, B, C, E.

25.** During thoracentesis, 1200 mL of fluid is rapidly evacuated.

Which complications may occur?

- A. Acute pulmonary edema
- B. Pleural shock
- C. Pneumothorax
- D. Hypertension
- E. Cardiac arrest

Correct answers: A, B, C, E.

26.** A patient undergoes lung ultrasound. Multiple B-lines are detected bilaterally.

Which interpretations are correct?

- A. Interstitial involvement
- B. Pulmonary edema
- C. Pneumonia
- D. Normal lung aeration
- E. Fluid-air coexistence

Correct answers: A, B, C, E.

27.** A patient with dyspnea has normal A-lines and lung sliding on ultrasound.

Which conclusions are correct?

- A. Normal lung aeration
- B. Absence of pleural effusion
- C. Absence of interstitial syndrome
- D. Pneumothorax excluded
- E. Pulmonary edema present

Correct answers: A, B, C.

28.** A bronchoscopy is performed in a patient with hemoptysis.

Which actions are possible?

- A. Visualization of bleeding source
- B. Tumor biopsy
- C. Foreign body extraction
- D. Measurement of lung volumes
- E. Cytological sampling

Correct answers: A, B, C, E.

29.** After bronchoscopy, a patient develops dyspnea and hemoptysis.

Which complications should be considered?

- A. Pneumothorax
- B. Hypoventilation
- C. Cardiac arrhythmias
- D. Hemorrhage
- E. Pulmonary embolism

Correct answers: A, B, C, D.

30.** Pulse oximetry is used in a patient with respiratory distress.

Which statements are correct?

- A. It is non-invasive
- B. It estimates arterial oxygen saturation
- C. It measures PaO_2 directly
- D. It can be applied to finger or earlobe
- E. It uses ionizing radiation

Correct answers: A, B, D.

31.** A discrepancy exists between pulse oximetry and ABG results.

Which statements are correct?

- A. ABG directly measures PaO_2
- B. Pulse oximetry estimates saturation
- C. ABG is invasive
- D. Pulse oximetry replaces ABG
- E. Both provide complementary data

Correct answers: A, B, C, E.

32.** A patient with suspected pulmonary embolism undergoes CT angiography.

Which statements are correct?

- A. Contrast enhances pulmonary circulation
- B. Iodinated contrast is required
- C. Renal function must be considered
- D. PET-CT is first-line
- E. CT provides anatomical detail

Correct answers: A, B, C, E.

33.** A patient undergoes pleural fluid cytology.

Which findings suggest malignancy?

- A. Malignant cells
- B. Hemorrhagic fluid
- C. Lymphocyte predominance
- D. Mesothelial cells absent
- E. Eosinophilia

Correct answers: A, B, D.

34.** A patient with suspected tuberculosis has pleural effusion.

Which pleural fluid findings support TB?

- A. ADA >50 µg/L
- B. Lymphocytes >85%
- C. Low glucose
- D. Transudative features
- E. Acid-fast bacilli

Correct answers: A, B, C, E.

35.** A critically ill patient undergoes arterial blood sampling.

Which statements are correct?

- A. Radial artery is preferred
- B. The procedure is invasive
- C. Bright red pulsatile blood is obtained
- D. Compression is needed after sampling
- E. Venous blood is acceptable

Correct answers: A, B, C, D.

36.** A patient with dyspnea has normal spirometry but abnormal ABG.

Which interpretations are possible?

- A. Gas exchange disorder
- B. Early pulmonary disease
- C. Normal lung function excludes pathology
- D. ABG adds complementary information
- E. Spirometry assesses ventilation, not gas exchange

Correct answers: A, B, D, E.

37.** A patient with obesity presents with decreased vital capacity.

Which mechanisms may contribute?

- A. Extrathoracic restriction
- B. Reduced chest wall compliance
- C. Increased TLC
- D. Diaphragmatic limitation
- E. Obstructive syndrome

Correct answers: A, B, D.

38.** A patient with ascites shows reduced VC on spirometry.

Which explanations are correct?

- A. Extrathoracic cause
- B. Restrictive pattern
- C. Increased RV
- D. Reduced lung expansion
- E. Obstructive disease

Correct answers: A, B, D.

39.** A patient with ARDS undergoes lung function and imaging evaluation.

Which findings are expected?

- A. Decreased VC
- B. Decreased TLC
- C. Pulmonary opacities on X-ray
- D. Increased FEV_1/FVC
- E. Normal gas exchange

Correct answers: A, B, C, D.

40. **A patient with dyspnea has multiple diagnostic tests performed.

Which statements are correct?

- A. Clinical exam raises hypotheses
- B. Paraclinical tests confirm and quantify disease
- C. No single test replaces the clinician
- D. Imaging replaces spirometry
- E. Integrated interpretation is required

Correct answers: A, B, C, E.

Assertion-reason questions

All the questions from this paragraph will follow the standard format: A is an assertion, R is a reason. Options: A/B/C/D/E. You have to choose which option represents the correct answer.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

1. **A:** Chest X-ray is considered a non-invasive diagnostic method.

R: It uses X-rays to obtain images without penetrating the body with instruments.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A.

2. **A:** Chest X-ray provides functional information about ventilation.

R: Functional respiratory assessment is performed by spirometry.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: D.

3. **A:** The PA chest X-ray projection minimizes cardiac magnification.

R: The heart is positioned closer to the detector and the source-detector distance is greater.

Correct answer: A.

4. **A:** In supine AP chest radiography, pleural effusions may be missed.

R: Pleural fluid layers posteriorly when the patient is supine.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A.

5. **A:** Posterior ribs are easier to identify on chest X-ray than anterior ribs.

R: Posterior ribs are more horizontally oriented and attach to thoracic vertebrae.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A.

6. **A:** Air appears black on conventional chest radiography.

R: Air absorbs the smallest amount of X-rays.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A.

7. **A:** Metal appears white on chest radiography.

R: Metal absorbs all X-rays that intersect it.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A.

8. **A:** Breast shadows can cause false pulmonary veiling.

R: Extrapulmonary structures may reduce radiographic transparency.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A.

9. **A:** Pulmonary opacities must always be described by their size.

R: Size measurement helps differentiate micronodular from larger lesions.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A.

10. **A:** Micronodular pulmonary opacities measure 1-3 mm.

R: Multiple micronodules produce a miliary pattern.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A

11. **A:** Spirometry is essential in diagnosing chronic pulmonary diseases.

R: It evaluates air volumes and flows during respiratory cycles.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A

12. **A:** Spirometry results depend on patient age, sex, and body size.

R: Predicted normal values are adjusted according to these parameters.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A

13. **A:** A spirometry quality grade F test must not be used clinically.

R: Grade F indicates an invalid and non-repeatable test.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A

14. **A:** Coughing during forced expiration affects FEV₁ accuracy.

R: FEV₁ depends on uninterrupted expiratory flow.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A

15. **A:** Spirometry is useful for monitoring treatment response.
R: Changes in lung function over time reflect disease evolution.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A

16. **A:** Active tuberculosis is a contraindication to spirometry.
R: Forced expiratory maneuvers increase transmission risk.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A

17. **A:** Vital capacity normally decreases after the age of 25.
R: Physiological aging leads to reduced lung compliance.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: B

18. **A:** Pregnancy may cause a decrease in vital capacity.
R: Increased abdominal pressure limits diaphragmatic movement.

Correct answer: A

19. **A:** Residual volume is increased in emphysema.
R: Loss of elastic recoil leads to air trapping.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A

20. **A:** A decreased TLC is typical of restrictive syndromes.
R: Restrictive diseases limit lung expansion.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A

21. **A:** A reduced FEV₁/FVC ratio indicates obstructive ventilatory dysfunction.

R: Airflow limitation primarily affects forced expiration.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A

22. **A:** Increased FEV₁/FVC ratio may be seen in interstitial lung disease.

R: Increased elastic recoil enhances expiratory flow.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A

23. **A:** Arterial blood gas analysis measures PaO₂ and PaCO₂.

R: These parameters reflect arterial oxygenation and ventilation.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A

24. **A:** Respiratory acidosis occurs when CO₂ elimination is impaired.

R: Reduced pulmonary ventilation leads to CO₂ retention.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A

25. **A:** Severe respiratory acidosis may progress to coma.

R: Hypercapnia depresses central nervous system function.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A

26. **A:** Chronic respiratory acidosis patients rely mainly on hypoxic drive.

R: Central chemoreceptors become less sensitive to CO₂.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A

27. **A:** Respiratory alkalosis results from hyperventilation.

R: Excessive CO₂ elimination increases blood pH.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A

28. **A:** Panic attacks may cause respiratory alkalosis.

R: Anxiety stimulates respiratory centers.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A

29. **A:** Respiratory alkalosis may cause cerebral vasoconstriction.

R: Reduced PaCO_2 leads to decreased cerebral blood flow.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A

30. **A:** Hypokalemia can occur in respiratory alkalosis.

R: Alkalemia shifts potassium into cells.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A

31. **A:** CT provides higher resolution than chest X-ray.

R: CT acquires thin-section images processed by computer.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A

32. **A:** Iodinated contrast enhances pulmonary vascular visualization on CT.

R: Contrast increases radiographic density of blood vessels.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A

33. **A:** PET-CT detects tumors based on metabolic activity.

R: Neoplastic tissue shows increased glucose uptake.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A

34. **A:** Sputum examination can identify malignant cells.

R: Cytological analysis detects cellular atypia.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A

35. **A:** Purulent pleural fluid suggests empyema.

R: Bacterial infection produces pus formation.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A

36. **A:** Pleural fluid with ADA >50 µg/L suggests tuberculosis.

R: ADA is increased in lymphocyte-rich effusions.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A

37. **A:** Lung ultrasound evaluates lung pathology mainly via artifacts.

R: Air prevents direct visualization of pulmonary parenchyma.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A

38. **A:** B-lines indicate interstitial lung involvement.

R: They are generated by coexistence of air and fluid.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A

39. **A:** Bronchoscopy allows biopsy of bronchial tumors.

R: The bronchoscope permits direct access to airway lesions.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A

40. **A:** No paraclinical test replaces clinical judgment.

R: Diagnosis requires integration of clinical and paraclinical data.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A

Difficult questions

1. Regarding heart size evaluation on chest radiography, choose the correct statements:
 - AP projection may falsely suggest cardiomegaly
 - Supine position reduces cardiac magnification
 - PA projection provides the most accurate cardiac silhouette
 - Short source-detector distance reduces distortion
 - Cardiac size assessment is unreliable in AP supine films

Correct answers: A, C, E.

2. Which factors may cause underestimation of pleural effusion on chest X-ray?
 - Supine positioning
 - Horizontal X-ray beam
 - Posterior layering of fluid
 - PA erect projection
 - Small effusion volume

Correct answers: A, C, E.

3. A pulmonary opacity of supracostal intensity implies:
 - Complete masking of ribs
 - Density similar to mediastinum
 - Always malignant pathology
 - Very high tissue density
 - Preserved vascular markings

Correct answers: A, B, D.

4. Which features favor a **true** pulmonary veiling rather than a false one?
 - Association with early pneumonia
 - Obesity
 - Pachypleuritis
 - Breast shadows
 - Pulmonary congestion

Correct answers: A, C, E.

5. Loss of the right cardiophrenic angle on chest X-ray may be due to:

- A. Right pleural effusion
- B. Right lower lobe pneumonia
- C. Pericardial effusion
- D. Left lung atelectasis
- E. Massive ascites

Correct answers: A, B, C.

6. A normal FEV₁/FVC ratio with reduced FVC suggests:

- A. Restrictive ventilatory dysfunction
- B. Obstructive syndrome
- C. Reduced lung volumes
- D. Possible extrapulmonary restriction
- E. Air trapping as primary mechanism

Correct answers: A, C, D.

7. Which mechanisms contribute to increased residual volume in COPD?

- A. Decreased elastic recoil
- B. Intrinsic airway narrowing
- C. Abnormal traction on healthy lung zones
- D. Reduced diaphragmatic excursion only
- E. Air trapping

Correct answers: A, B, C, E.

8. A severely reduced TLC (<40% predicted) is most consistent with:

- A. Severe restrictive syndrome
- B. Mild obstructive disease
- C. Advanced interstitial lung disease
- D. Severe kyphoscoliosis
- E. Early asthma

Correct answers: A, C, D.

9. Which conditions may lead to **decreased** residual volume?

- A. Atelectasis
- B. Bronchopneumonia
- C. Pulmonary resections
- D. Emphysema
- E. Asthma

Correct answers: A, B, C.

10. An increased FEV_1/FVC ratio occurs because of:

- A. Increased elastic recoil
- B. Uniform airway narrowing
- C. Alveolar-interstitial disease
- D. Reduced lung compliance
- E. Small airway obstruction

Correct answers: A, C.

11. Which findings are consistent with **chronic** respiratory acidosis?

- A. Near-normal respiratory rate
- B. Hyperkalemia
- C. Pink skin due to vasodilation
- D. Marked acute dyspnea
- E. Renal bicarbonate retention

Correct answers: A, B, C, E.

12. Which situations may precipitate **acute** respiratory acidosis?

- A. Opioid overdose
- B. Severe asthma attack
- C. Brainstem stroke
- D. Panic attack
- E. Mechanical overventilation

Correct answers: A, B, C.

13. In respiratory acidosis, neurological manifestations occur because:

- A. CO_2 diffuses freely into the CNS
- B. Cerebral vasodilation occurs
- C. Intracranial pressure may increase
- D. Hypocalcemia develops
- E. Neuronal depression ensues

Correct answers: A, B, C, E.

14. Which features distinguish **chronic** from **acute** respiratory acidosis?

- A. Renal compensation
- B. Hypoxic respiratory drive
- C. Abrupt pH changes
- D. Greater tolerance to hypercapnia
- E. Immediate coma development

Correct answers: A, B, D.

15. Respiratory alkalosis may produce cardiovascular complications through:

- A. Coronary vasoconstriction
- B. Increased myocardial oxygen demand
- C. Reduced cerebral blood flow
- D. Systemic vasodilation
- E. Hypokalemia-induced arrhythmias

Correct answers: A, C, E.

16. Chest CT provides superior diagnostic information compared with X-ray because it:

- A. Eliminates superimposition
- B. Offers thin-section imaging
- C. Has higher spatial resolution
- D. Provides functional ventilation data
- E. Visualizes mediastinal structures clearly

Correct answers: A, B, C, E.

17. Iodinated contrast CT should be used cautiously in patients with:

- A. Thyroid disease
- B. Renal impairment
- C. Pregnancy
- D. COPD
- E. Diabetes mellitus

Correct answers: A, B, C.

18. PET-CT may fail to detect lesions when:

- A. Metabolic activity is low
- B. Lesions are very small
- C. Tumor glucose uptake is minimal
- D. Lesions are purely fibrotic
- E. Lesions are metabolically active

Correct answers: A, C, D.

19. Pulmonary angiography is limited by:

- A. Invasiveness
- B. Contrast allergy risk
- C. Radiation exposure
- D. Inability to visualize circulation
- E. Patient discomfort

Correct answers: A, B, C, E.

20. Ventilation-perfusion scintigraphy is useful in:

- A. Pulmonary embolism
- B. Emphysema
- C. Pulmonary fibrosis
- D. Pneumonia
- E. Lung cancer staging

Correct answers: A, B, C.

21. Rapid evacuation of large pleural effusions is dangerous because it may cause:

- A. Acute pulmonary edema
- B. Pleural shock
- C. Passive pneumothorax
- D. Hypertension
- E. Cardiac arrest

Correct answers: A, B, C, E.

22. Which pleural fluid features strongly suggest tuberculosis?

- A. ADA >50 μ g/L
- B. Lymphocytes >85%
- C. Low glucose
- D. Transudative density
- E. Positive Ziehl-Neelsen stain

Correct answers: A, B, C, E.

23. Hemorrhagic pleural effusion may be seen in:

- A. Neoplasia
- B. Tuberculosis
- C. Trauma
- D. Pulmonary embolism
- E. Heart failure

Correct answers: A, B, C, D

24. Which complications are considered **major** after thoracentesis?

- A. Pleural shock
- B. Acute pulmonary edema
- C. Subcutaneous emphysema
- D. Cardiac arrest
- E. Mild local pain

Correct answers: A, B, D

25. Lung ultrasound evaluates pulmonary pathology primarily by:

- A. Direct visualization of alveoli
- B. Analysis of artifacts
- C. Pleural line assessment
- D. Doppler blood flow
- E. A- and B-line interpretation

Correct answers: B, C, E

26. Diffuse bilateral B-lines suggest:

- A. Interstitial syndrome
- B. Pulmonary edema
- C. ARDS
- D. Normal lung aeration
- E. Fluid-air coexistence

Correct answers: A, B, C, E

27. Normal lung ultrasound findings include:

- A. Lung sliding
- B. A-lines
- C. Absence of B-lines
- D. Consolidation
- E. Thickened pleural line

Correct answers: A, B, C

28. Bronchoscopy carries risk of complications such as:

- A. Hypoventilation
- B. Arrhythmias
- C. Hemoptysis
- D. Pneumothorax
- E. Acute renal failure

Correct answers: A, B, C, D

29. Bronchoscopy is contraindicated or limited in patients with:

- A. Severe hypoxemia
- B. Unstable cardiovascular status
- C. Uncontrolled arrhythmias
- D. Mild chronic cough
- E. Severe dyspnea

Correct answers: A, B, C, E.

30. Which statements about arterial blood sampling are correct?

- A. Radial artery is preferred
- B. Bright red pulsatile blood confirms arterial access
- C. Prolonged compression is needed in anticoagulated patients
- D. Venous blood is equivalent for ABG
- E. It is an invasive procedure

Correct answers: A, B, C, E.

31. Normal spirometry does NOT exclude pathology because:

- A. Gas exchange abnormalities may exist
- B. Early disease may be subclinical
- C. ABG may still be abnormal
- D. Spirometry assesses ventilation, not perfusion
- E. Imaging is always abnormal first

Correct answers: A, B, C, D.

32. In chronic COPD patients, excessive oxygen administration is dangerous because:

- A. It suppresses hypoxic respiratory drive
- B. CO₂ retention may worsen
- C. Respiratory acidosis may deepen
- D. Oxygen is toxic at any dose
- E. Ventilation-perfusion mismatch increases

Correct answers: A, B, C, E.

33. A patient with severe dyspnea has normal chest X-ray but abnormal ABG. This suggests:

- A. Early pulmonary disease
- B. Purely functional disorder
- C. Gas exchange impairment
- D. Need for further testing
- E. Imaging failure

Correct answers: A, C, D.

34. Which combinations best reflect **integrated respiratory assessment**?

- A. Clinical exam + imaging
- B. Spirometry + ABG
- C. Imaging + ABG
- D. Single paraclinical test
- E. Multimodal evaluation

Correct answers: A, B, C, E.

35. A false sense of respiratory normality may arise from:

- A. Normal auscultation
- B. Normal spirometry
- C. Subclinical disease
- D. Lack of imaging
- E. Absence of symptoms

Correct answers: A, B, C, E.

36. Early interstitial lung disease may be missed on auscultation because:

- A. Crackles may be absent
- B. Lesions are microscopic
- C. Imaging is more sensitive
- D. Spirometry is always abnormal
- E. Symptoms may be minimal

Correct answers: A, B, C, E.

37. Which findings argue **against** a transudative pleural effusion?

- A. Protein >3 g/dL
- B. Pleural LDH elevation
- C. ADA >50 μ g/L
- D. NT-proBNP elevation
- E. Hemorrhagic appearance

Correct answers: A, B, C, E.

38. Pulmonary embolism may be difficult to diagnose because:

- A. Chest X-ray may be normal
- B. Auscultation may be normal
- C. ABG may show isolated hypoxemia
- D. Small emboli are asymptomatic
- E. CT angiography is always positive

Correct answers: A, B, C, D.

39. Which diagnostic tests primarily assess **ventilation** rather than **oxygenation**?

- A. Spirometry
- B. ABG PaCO₂
- C. Pulse oximetry
- D. FEV₁/FVC
- E. CT scan

Correct answers: A, B, D.

40. The statement "No test replaces the clinician" is valid because:

- A. Tests must be interpreted in context
- B. Paraclinical tests confirm, not replace
- C. Clinical reasoning integrates all data
- D. Machines eliminate diagnostic errors
- E. Observation guides test selection

Correct answers: A, B, C, E.

Chapter VI. Semiology of Upper respiratory airways infections, Asthma, Hypersensibilisation pneumonia, Bronchiectasias, Chistic fibrosis

Daniel Florin Lighezan, Ciprian Ilie Rosca

Mixed Questions

1. A 22-year-old woman presents with rhinorrhea, sneezing, headache, and feeling cold. Her nasal discharge is initially clear but becomes purulent after several days. Which diagnosis is most consistent with this evolution?
 - Acute allergic rhinitis
 - Acute coryza (common cold)
 - Bacterial sinusitis from onset
 - Chlamydial pharyngitis
 - Influenza pneumonia

Correct answer: B

2. A 35-year-old man reports a dry, irritated cough with burning throat sensation. He denies fever but has retrosternal discomfort. Examination shows mild stridor on deep inspiration. What condition is most likely?
 - Acute bronchitis
 - Lower airway obstruction
 - Laryngospasm
 - Tracheal syndrome
 - Epiglottitis

Correct answer: D

3. A 60-year-old smoker presents with persistent tracheal irritation and cough. Imaging reveals extrinsic tracheal compression from a plunging goiter. Which syndrome does this correspond to?
 - Asthmatic syndrome
 - Mediastinal syndrome
 - Tracheal syndrome
 - Bronchiectasis
 - Chronic pharyngitis

Correct answer: C

4. A child is brought in with fever, irritability, sore throat, and a harsh, irritated cough. Onset was gradual with nasal symptoms first. Which of the following conditions is most compatible with the presentation?

- A. Acute coryza
- B. Croup
- C. Pertussis
- D. Bronchiolitis
- E. Influenza pneumonia

Correct answer: A

5. A patient develops acute viral tracheitis. Which symptom most strongly suggests involvement of the trachea rather than the larynx or bronchi?

- A. Hoarseness
- B. Productive cough
- C. Burning retrosternal pain with cough
- D. Audible wheezing
- E. Severe dyspnea at rest

Correct answer: C

6. The most common etiological agents of acute coryza are:

- A. Influenza viruses
- B. Coronaviruses
- C. Rhinoviruses
- D. Respiratory syncytial virus
- E. Epstein-Barr virus

Correct answer: C.

7. Short-term immunity in acute coryza results in approximately:

- A. One cold every two years
- B. One cold per year
- C. Five colds per year
- D. Three colds per year
- E. Persistent immunity

Correct answer: D.

8. Purulent rhinorrhea in acute coryza suggests:

- A. Allergic rhinitis
- B. Viral persistence
- C. Microbial superinfection
- D. Chronic sinusitis
- E. Vasomotor rhinitis

Correct answer: C.

9. Hoarseness and veiled cough are typical of:

- A. Acute pharyngitis
- B. Acute laryngitis
- C. Acute tracheitis
- D. Acute bronchitis
- E. Asthma

Correct answer: B.

10. Barking, irritating cough is characteristic of:

- A. Acute bronchitis
- B. Asthma
- C. Tracheal syndrome
- D. Pneumonia
- E. COPD

Correct answer: C.

11. Inspiratory stridor in tracheal syndrome indicates:

- A. Alveolar collapse
- B. Bronchospasm
- C. Pleural effusion
- D. Upper airway obstruction
- E. Pulmonary fibrosis

Correct answer: D.

12. A linear spirometric curve is typical for:

- A. Asthma
- B. COPD
- C. Restrictive lung disease
- D. Tracheal obstruction
- E. Pulmonary embolism

Correct answer: D.

13. Asthma is defined by variable airflow limitation associated with:

- A. Alveolar destruction
- B. Fibrotic lung disease
- C. Chronic airway inflammation
- D. Infection
- E. Pleural pathology

Correct answer: C.

14. The main characteristic of asthma symptoms is its:

- A. Irreversibility
- B. Progressive severity
- C. Variability over time
- D. Infectious origin
- E. Constant intensity

Correct answer: C.

15. The pathophysiological triad of asthma includes all EXCEPT:

- A. Bronchospasm
- B. Mucosal edema
- C. Mucus hypersecretion
- D. Alveolar fibrosis
- E. Airflow obstruction

Correct answer: D.

16. Allergic asthma most commonly begins:

- A. After 60 years
- B. In adolescence only
- C. In childhood
- D. After occupational exposure
- E. After smoking initiation

Correct answer: C.

17. Non-allergic asthma sputum examination may show:

- A. Pure eosinophilia only
- B. Mast cell predominance
- C. Neutrophilic or paucigranulocytic inflammation
- D. Charcot-Leyden crystals
- E. Bacterial colonies

Correct answer: C.

18. Cough-variant asthma is characterized by:

- A. Wheezing predominance
- B. Permanent dyspnea
- C. Cough as the only symptom
- D. Fixed airflow obstruction
- E. Absence of reversibility

Correct answer: C.

19. Adult-onset asthma is more frequent in:

- A. Men
- B. Women
- C. Children
- D. Smokers only
- E. Athletes

Correct answer: B.

20. The strongest risk factor for asthma is:

- A. Smoking
- B. Air pollution
- C. Atopy
- D. Age
- E. Gender

Correct answer: C.

21. Excessive hygiene increases asthma risk by:

- A. Enhancing Th1 response
- B. Increasing IgA production
- C. Maintaining Th2 predominance
- D. Reducing cytokine release
- E. Preventing infections

Correct answer: C.

22. Which dietary deficiency increases asthma risk?

- A. Vitamin A
- B. Vitamin K
- C. Vitamin D
- D. Vitamin B12
- E. Iron

Correct answer: C.

23. Obesity becomes a risk factor for asthma at a BMI over:

- A. 25 kg/m²
- B. 27 kg/m²
- C. 28 kg/m²
- D. 30 kg/m²
- E. 35 kg/m²

Correct answer: D.

24. Aspirin-induced asthma is triggered by:

- A. Corticosteroids
- B. Antibiotics
- C. Antihistamines
- D. NSAIDs
- E. Leukotriene antagonists

Correct answer: D.

25. Exercise-induced asthma is mediated mainly through:

- A. Hypoxia
- B. Lactic acidosis
- C. Hyperventilation and cold air inhalation
- D. Bronchial infection
- E. Pulmonary edema

Correct answer: C.

26. Premenstrual worsening of asthma is related to:

- A. Infection
- B. Obesity
- C. Allergens
- D. Hormonal factors
- E. Smoking

Correct answer: D.

27. The early asthmatic response peaks at approximately:

- A. 5 minutes
- B. 15 minutes
- C. 30 minutes after exposure
- D. 2 hours
- E. 8 hours

Correct answer: C.

28. Late asthmatic response is associated with:

- A. Bronchodilation
- B. Reduced inflammation
- C. Increased airway hyperresponsiveness
- D. Alveolar fibrosis
- E. Pleural effusion

Correct answer: C.

29. Air trapping in asthma initially leads to:

- A. Metabolic acidosis
- B. Respiratory acidosis
- C. Respiratory alkalosis
- D. Mixed acidosis
- E. Normal blood gases

Correct answer: C.

30. Progressive air trapping with exhaustion leads to:

- A. Respiratory alkalosis
- B. Metabolic alkalosis
- C. Hypocapnia
- D. Respiratory acidosis
- E. Compensated acidosis

Correct answer: D.

31. Asthma attacks typically occur:

- A. After meals
- B. At noon
- C. During exercise only
- D. At night or early morning
- E. Exclusively daytime

Correct answer: D.

32. Pearly, mucous sputum in asthma is typical of:

- A. Infectious asthma
- B. COPD
- C. Allergic asthma
- D. Lung cancer
- E. Pulmonary fibrosis

Correct answer: C.

33. Diffuse pulmonary hypersonority during an asthma attack is found on:

- A. Inspection
- B. Palpation
- C. Percussion
- D. Auscultation
- E. Spirometry

Correct answer: C.

34. "Dove loft noise" describes:

- A. Pleural rub
- B. Crackles of fibrosis
- C. Diffuse bronchial rales in asthma
- D. Cardiac murmur
- E. Tracheal stridor

Correct answer: C.

35. In severe asthma crisis, the patient may be unable to:

- A. Sit upright
- B. Cough
- C. Wheeze
- D. Speak full sentences
- E. Maintain eye contact

Correct answer: D.

36. Status asthmaticus is defined as an asthma attack lasting more than:

- A. 6 hours
- B. 12 hours
- C. 18 hours
- D. 24 hours
- E. 48 hours

Correct answer: D.

37. A PEFR <33% of predicted suggests:

- A. Mild asthma
- B. Moderate asthma
- C. Severe asthma
- D. Life-threatening asthma attack
- E. Normal pulmonary function

Correct answer: D.

38. Between asthma attacks, spirometry is usually:

- A. Restrictive
- B. Obstructive
- C. Mixed
- D. Normal in episodic asthma
- E. Severely reduced

Correct answer: D.

39. DLCO in asthma is typically:

- A. Decreased
- B. Increased
- C. Variable
- D. Normal
- E. Absent

Correct answer: D.

40. A $\geq 12\%$ and ≥ 200 ml increase in FEV1 after bronchodilator confirms:

- A. Restrictive lung disease
- B. Fixed obstruction
- C. Pulmonary fibrosis
- D. Reversible airflow obstruction
- E. Upper airway obstruction

Correct answer: D.

Progressive questions

1. In asthma:

- A. The patient may present with wheezing, cough, chest pain.
- B. Usually occurs in heavy smokers >10 years.
- C. Can be exacerbated by respiratory infections.
- D. Triad occurs: bronchospasm, bronchial mucosal edema, hypersecretion of mucus
- E. Usually not associated with food allergies or eczema.

Correct answers: A, C, D.

2. Risk factors in asthma:

- A. Allergic rhinitis in <1% of cases.
- B. Mold exposure.
- C. Excessive hygiene predisposes to asthma.
- D. Virus exposure cannot induce asthma.
- E. Vitamin K deficiency

Correct answers: B, C.

3. Asthma:

- A. Vitamin C deficiency can induce asthma.
- B. May have a genetic component.
- C. Continuous exposure to flour can induce asthma.
- D. Obesity is not a risk factor.
- E. Pollen and animal dander do not cause asthma.

Correct answers: A, B, C.

4. Choose the true statements:

- A. Cold air and excessive laughter can be triggers for asthma.
- B. During an asthma exacerbation, the phenomenon of air trapping occurs
- C. The patient in an asthma attack cannot breathe air F
- D. Allergic asthma usually occurs in adulthood F
- E. Beta-blockers can induce an asthma attack. A

Correct answers: A, B, E.

5. Choose the true statements about asthma:

- A. In asthma, hyperpnea, wheezing and cough occur.
- B. The attack usually lasts between 15min and 2 h
- C. The attack usually stops with bronchoconstrictors.
- D. Tachypnea may occur >25 resp/min
- E. PEFR <33% of normal value (<100 ml)

Correct answer: A, B, D, E.

6. Tests in asthma:

- A. Bronchodilation test increases FEV1 by at least 12% one hour after administration.
- B. Bronchodilation test increases FEV1 by at least 12% 15 min after administration.
- C. When bronchodilation test with salbutamol cannot be performed, histamine is administered.
- D. When bronchodilation test with salbutamol cannot be performed, methylcholine is administered.
- E. No supervision is required during the test.

Correct answers: B, C, D.

7. The differential diagnosis in hypersensitivity pneumonia can be made with:

- A. Interstitial pneumonia.
- B. Pneumohemothorax
- C. Pulmonary fibrosis.
- D. Lung cancer
- E. Pericarditis

Correct answers: A, C.

8. Bronchiectasis:

- A. May occur in immunodeficiency A
- B. Predominantly median location may occur in gastroesophageal reflux disease
- C. May occur pain in the right hypochondrium.
- D. May occur recurrent episodes of fever
- E. Disseminated bronchial rales, wheezing, signs of pulmonary air hyperinflation: in early/mild forms

Correct answers: A, D.

9. Choose the true statements about bronchiectasis:

- A. Bronchiectasis with *Pseudomonas aeruginosa* has a good prognosis.
- B. Among the complications of bronchiectasis is amyloidosis.
- C. Among the complications is chronic pulmonary cor pulmonale
- D. Electron microscopic studies of the nasal or bronchial mucosa: for Kartagener syndrome (immobile cilia).
- E. Spirometry results in severe forms are normal.

Correct answers: B, C, D.

10. In bronchopulmonary cancer, the following may occur:

- A. Weight loss.
- B. Risk factors may include asbestos, bischloromethyl ether, nickel, hexavalent chromium, arsenic, polycyclic aromatic hydrocarbons.
- C. Pre-existing lung disease and low fruit and vegetable intake are not risk factors.
- D. Small cell bronchopulmonary cancer has the highest cure rate.
- E. The most common symptom is cough.

Correct answers: A, B, E.

11. In bronchopulmonary cancer the following are associated symptoms:

- A. Weight gain.
- B. Axillary lymphadenitis.
- C. Pain on palpation of bony prominences
- D. Painless hepatomegaly.
- E. Acanthosis nigricans

Correct answers: B, C, E.

12. Acute coryza is characterized by:

- A. Sudden onset
- B. Viral etiology
- C. Long-term immunity
- D. Oculo-nasal catarrh
- E. Frequent bacterial origin

Correct answers: A, B, D.

13. General symptoms of acute coryza include:

- A. Headache
- B. Fever
- C. Myalgia
- D. Hemoptysis
- E. Weight loss

Correct answers: A, B, C.

14. Functional symptoms in acute coryza may include:

- A. Sneezing
- B. Watery rhinorrhea
- C. Odynophagia
- D. Productive cough with purulent sputum
- E. Dysphonia

Correct answers: A, B, C, E.

15. Causes of tracheal syndrome include:

- A. Viral tracheobronchitis
- B. Foreign body aspiration
- C. Tracheomalacia
- D. Pulmonary embolism
- E. Mediastinal tumors

Correct answers: A, B, C, E.

16. Clinical manifestations of tracheal syndrome include:

- A. Barking cough
- B. Inspiratory dyspnea
- C. Stridor
- D. Expiratory wheezing only
- E. Mucous or blood-streaked sputum

Correct answers: A, B, C, E.

17. Paraclinical investigations useful in tracheal syndrome are:

- A. Spirometry
- B. Chest X-ray
- C. Bronchoscopy
- D. ECG
- E. Chest CT

Correct answers: A, B, C, E.

18. Asthma is defined by the presence of:

- A. Wheezing
- B. Chest tightness
- C. Cough
- D. Variable expiratory airflow limitation
- E. Permanent alveolar destruction

Correct answers: A, B, C, D.

19. Asthma symptoms are characterized by:

- A. Variability over time
- B. Variability in intensity
- C. Constant daily symptoms
- D. Trigger-related exacerbations
- E. Irreversibility

Correct answers: A, B, D.

20. The pathophysiological triad of asthma includes:

- A. Bronchospasm
- B. Bronchial mucosal edema
- C. Hypersecretion of mucus
- D. Alveolar fibrosis
- E. Pulmonary infarction

Correct answers: A, B, C.

21. Allergic asthma is associated with:

- A. Childhood onset
- B. Personal or familial allergy history
- C. Eosinophilic airway inflammation
- D. Negative skin tests
- E. Elevated IgE levels

Correct answers: A, B, C, E.

22. Non-allergic asthma may show:

- A. Neutrophilic inflammation
- B. Eosinophilic inflammation
- C. Paucigranulocytic pattern
- D. Always elevated IgE
- E. Absence of hypersensitivity reaction

Correct answers: A, B, C, E.

23. Cough-variant asthma is characterized by:

- A. Cough as the only symptom
- B. Occurrence in children
- C. Occurrence in adults
- D. Constant airflow limitation
- E. Possible later appearance of wheezing

Correct answers: A, B, C, E.

24. Adult-onset asthma is typically:

- A. More frequent in women
- B. Usually allergic
- C. Non-allergic
- D. Onset after childhood
- E. Related to occupational exposure only

Correct answers: A, C, D.

25. Major risk factors for asthma include:

- A. Atopy
- B. Genetic predisposition
- C. Smoking alone
- D. Epigenetic mechanisms
- E. Family history

Correct answers: A, B, D, E.

26. Infectious factors related to asthma include:

- A. Rhinoviruses
- B. Mold exposure
- C. Excessive hygiene
- D. Bacterial pneumonia only
- E. Reduced Th1 expression

Correct answers: A, B, C, E.

27. Dietary factors increasing asthma risk include deficiency of:

- A. Vitamin D
- B. Vitamin C
- C. Magnesium
- D. Selenium
- E. Vitamin K

Correct answers: A, B, C, D.

28. Environmental risk factors for asthma include:

- A. Ozone
- B. Sulfur dioxide
- C. Diesel particles
- D. Animal allergens
- E. High altitude

Correct answers: A, B, C, D.

29. Pharmacological agents that may trigger asthma include:

- A. Beta-blockers
- B. ACE inhibitors
- C. Aspirin
- D. Corticosteroids
- E. NSAIDs

Correct answers: A, B, C, E.

30. Physical triggers of asthma include:

- A. Cold air
- B. Hyperventilation
- C. Excessive laughter
- D. Warm humid air
- E. Perfumes

Correct answers: A, B, C, E.

31. Hormonal and systemic conditions influencing asthma include:

- A. Premenstrual period
- B. Hypothyroidism
- C. Thyrotoxicosis
- D. Diabetes mellitus
- E. Gastroesophageal reflux disease

Correct answers: A, B, C, E.

32. Early asthmatic response involves:

- A. Mast cell activation
- B. Th2 lymphocyte activation
- C. Bronchospasm
- D. Increased capillary permeability
- E. Fibrotic remodeling

Correct answers: A, B, C, D.

33. Late asthmatic response is associated with:

- A. Increased airway hyperresponsiveness
- B. Eosinophil activation
- C. Bronchial scarring
- D. Mucus plugging
- E. Immediate symptom relief

Correct answers: A, B, C, D.

34. Consequences of airway obstruction in asthma include:

- A. Air trapping
- B. Hyperinflation
- C. Increased work of breathing
- D. Uniform ventilation
- E. Uneven airflow distribution

Correct answers: A, B, C, E.

35. Early blood gas changes in asthma attack include:

- A. Hypoxemia
- B. Hypocapnia
- C. Respiratory alkalosis
- D. Hypercapnia
- E. Metabolic acidosis

Correct answers: A, B, C.

36. Severe asthma attack may lead to:

- A. CO₂ retention
- B. Respiratory acidosis
- C. Respiratory failure
- D. Decreased tidal volume
- E. Metabolic alkalosis

Correct answers: A, B, C, D.

37. Typical features of an asthma attack include:

- A. Nocturnal onset
- B. Paroxysmal dyspnea
- C. Wheezing
- D. Prolonged expiration
- E. Bradycardia

Correct answers: A, B, C, D.

38. Prodromal signs of asthma attack may include:

- A. Submental itching
- B. Interscapular pain
- C. Sense of impending doom
- D. Sudden hemoptysis
- E. Fever

Correct answers: A, B, C.

39. Physical examination during asthma crisis may reveal:

- A. Orthopnea
- B. Intercostal retraction
- C. Bradypnea
- D. Increased anteroposterior chest diameter
- E. Dullness on percussion

Correct answers: A, B, D.

40. Auscultatory findings in asthma attack include:

- A. Decreased vesicular murmur
- B. Prolonged expiration
- C. Snoring bronchial rales
- D. Fine crackles
- E. Pleural friction rub

Correct answers: A, B, C, D.

Advanced clinical vignettes

1. ** A 30-year-old teacher reports acute onset of nasal obstruction, sneezing, headache, and "feeling cold." After 48 hours, she develops burning throat dryness and an irritated cough. Which features support the diagnosis of acute coryza (common cold)?

- A. Sneezing and clear rhinorrhea
- B. Burning dryness in the throat
- C. Productive purulent sputum from onset
- D. Irritated cough
- E. High-grade fever ($>39^{\circ}\text{C}$)

Correct answers: A, B, D (slides 3-4 – 06 lecture – respiratory system 4)

2. ** A 48-year-old man complains of persistent cough, retrosternal burning, and noisy breathing. Exam reveals mild inspiratory stridor. Which etiologies may explain a tracheal syndrome?

- A. Acute viral infection
- B. Esophageal tumor compressing trachea
- C. Mediastinal tumors
- D. Plunging goiter
- E. Congenital bronchomalacia

Correct answers: A, B, C, D. (slide 5 – 06 lecture – respiratory system 4)

3. ** A 25-year-old student experiences worsening rhinorrhea that becomes purulent after 3 days, with frontal headache and sore throat. Which complications of acute coryza must be considered?

- A. Sinusitis
- B. Bacterial superinfection
- C. Tracheobronchitis
- D. Acute epiglottitis
- E. Otitis media

Correct answers: A, B, C, E. (slide 3 – 06 lecture – respiratory system 4)

4. ** A 70-year-old patient presents with chronic cough and progressive inspiratory stridor. Chest CT shows a mediastinal tumor compressing the trachea. Which symptoms are typical for tracheal obstruction syndromes?

- A. Retrosternal burning pain
- B. Localized wheezing
- C. Harsh, irritated cough
- D. Severe orthopnea
- E. Dry throat sensation

Correct answers: A, C, E. (slide 5 – 06 lecture – respiratory system 4)

5. ** A 10-year-old boy develops acute rhinorrhea, headache, sore throat, and a persistent irritated cough. Which clinical signs belong to acute upper respiratory tract infections?

- A. Headache
- B. Burning dryness of the throat
- C. Stridor from onset
- D. Irritated cough
- E. Nasal obstruction

Correct answers: A, B, D, E. (slides 2-4 – 06 lecture – respiratory system 4)

6.** A 22-year-old student develops sudden nasal obstruction, sneezing, watery rhinorrhea, and mild sore throat. Exam: oculo-nasal catarrh and pharyngeal erythema. Which statements fit best?

- A. Viral etiology is likely
- B. Long-term immunity is typical
- C. Sudden onset is typical
- D. Purulent rhinorrhea suggests microbial superinfection
- E. It usually lasts weeks to months

Correct answers: A, C, D.

7.** A 30-year-old has dysphonia and a hoarse, irritated cough with burning dryness in the throat after a "cold." Which symptom complex is most consistent?

- A. Acute laryngitis
- B. Acute coryza without laryngeal involvement
- C. Pharyngitis with odynophagia only
- D. Functional symptoms of URTI may include dysphonia
- E. This presentation excludes URTI

Correct answers: A, D.

8.** After smoke inhalation, a patient develops barking, irritating cough, inspiratory dyspnea, and stridor. Which are consistent with tracheal syndrome?

- A. Irritant cause is possible
- B. Stridor is compatible
- C. Inspiratory dyspnea is compatible
- D. Spirometry may show a linear aspect
- E. Only expiratory wheezing is expected

Correct answers: A, B, C, D.

9.** A child suddenly develops stridor and agitation after eating peanuts; concern for airway compromise. Which are appropriate evaluations mentioned?

- A. Bronchoscopy
- B. Chest CT
- C. Spirometry (linear aspect possible)
- D. Chest X-ray
- E. Echocardiography as first-line

Correct answers: A, B, C, D.

10.** A 19-year-old with episodic wheeze, chest tightness, cough, and variable symptoms triggered by exercise and viral infections. Which support asthma definition/features?

- A. Variable expiratory airflow limitation
- B. Symptoms vary over time and intensity
- C. Always fixed obstruction
- D. Triggers may include exercise and viral infections
- E. Chronic airway inflammation is typical

Correct answers: A, B, D, E.

11.** A patient with asthma has recurrent episodes featuring bronchospasm, mucosal edema, and increased mucus. Which triad components are correct?

- A. Bronchospasm
- B. Bronchial mucosal edema
- C. Hypersecretion of mucus
- D. Alveolar fibrosis
- E. Pulmonary infarction

Correct answers: A, B, C.

12.** A 10-year-old with eczema and allergic rhinitis has wheeze and cough; sputum pre-treatment shows eosinophils. Which fit allergic asthma phenotype?

- A. Often starts in childhood
- B. Associated with personal/familial allergy history
- C. Pre-treatment sputum may be eosinophilic
- D. Always non-allergic
- E. Skin tests are typically negative

Correct answers: A, B, C.

13.** A 45-year-old woman has first asthma-like episode; occupational asthma needs exclusion. Which are consistent with adult-onset asthma in the lecture?

- A. More frequent in women
- B. Tends to be non-allergic
- C. First attack occurs in adulthood
- D. Occupational asthma should be ruled out
- E. Always begins in childhood

Correct answers: A, B, C, D.

14.** A patient has asthma symptoms worsened by house dust and pollen, and reports symptoms after cat exposure. Which triggers are listed?

- A. Dermatophagoides
- B. Pollen
- C. Pets (cats)
- D. Beta-blockers (including topical)
- E. Vitamin K deficiency

Correct answers: A, B, C, D.

15.** A patient has asthma symptoms that improve during holidays and worsen at work in a flour-rich environment. Which are consistent with occupational factors?

- A. Symptoms reduce when removed from exposure
- B. Flour exposure can trigger occupational asthma
- C. Occupational exposure is never relevant
- D. >200 substances described
- E. Only viral infections trigger occupational asthma

Correct answers: A, B, D.

16.** A 33-year-old has nocturnal asthma attacks with sudden dyspnea, orthopnea, and wheeze; cough is dry initially and becomes productive with pearly sputum at end. Which statements fit?

- A. Attacks often occur at night/early morning
- B. Cough may be dry at start and productive at end
- C. Pearly mucous sputum is described
- D. This pattern excludes asthma
- E. Wheezing with prolonged exhalation occurs

Correct answers: A, B, C, E.

17.** During an asthma crisis, exam shows "forced inspiration" chest, increased AP diameter, and intercostal retraction. Which are expected on inspection?

- A. Orthopnea (anti-dyspneic attitude)
- B. Increased anteroposterior diameter
- C. Intercostal retraction
- D. Diffuse dullness to percussion
- E. Bradypnea listed on inspection

Correct answers: A, B, C, E.

18.** A patient with asthma crisis has diffuse hypersonority to percussion and decreased vesicular murmur with prolonged, hissing expiration. Which are expected findings?

- A. Diffuse hypersonority
- B. Decreased vesicular murmur
- C. Prolonged expiration
- D. Snoring/hissing bronchial rales and fine crackles
- E. Pleural friction rub as defining sign

Correct answers: A, B, C, D.

19.** A patient in ED can speak only in words, RR 30/min, HR 120/min, PEFR 40% predicted. Which match "severe asthma crisis" criteria?

- A. Inability to articulate sentences
- B. Tachypnea >25/min
- C. Tachycardia >110/min
- D. PEFR <50% but >33%
- E. PEFR must be >80%

Correct answers: A, B, C, D.

20.** A patient has >24h severe asthma attack unresponsive to treatment; now cyanotic with "respiratory silence." Which fit status asthmaticus (asthmatic malaise)?

- A. Duration >24 hours
- B. Respiratory silence possible
- C. PEFR <33% (<100 ml) mentioned
- D. Bradycardia and hypotension may occur
- E. Rapid spontaneous resolution is typical

Correct answers: A, B, C, D.

21.** An asthma patient's ABG during mild/moderate attack shows low PaO₂ and low PaCO₂ with alkalosis. Which match?

- A. Hypoxia may occur
- B. Hypocapnia may occur
- C. Respiratory alkalosis may occur
- D. Hypercapnia is typical in mild attacks
- E. This pattern can occur due to mixed lung areas

Correct answers: A, B, C, E.

22.** In severe asthma, a patient is exhausted; ABG shows low PaO₂ and high PaCO₂ with acidosis. Which are consistent?

- A. Global alveolar hypoventilation
- B. Hypercapnia
- C. Respiratory acidosis
- D. Hypoxia
- E. Respiratory alkalosis

Correct answers: A, B, C, D.

23.** Pre-treatment sputum microscopy shows eosinophils, Charcot-Leyden crystals, and Curschmann spirals. Which interpretation fits best?

- A. Allergic asthma pattern
- B. Infectious asthma pattern
- C. Neutrophil predominance expected
- D. Charcot-Leyden crystals are described
- E. Curschmann spirals are described

Correct answers: A, D, E.

24.** Spirometry shows reduced FEV1 and FEV1/FVC, and after 400 μg salbutamol, FEV1 increases by $\geq 12\%$ and ≥ 200 ml at 15 minutes. Which statements are correct?

- A. This supports asthma diagnosis
- B. Timing at 15 minutes is specified
- C. Reversibility criteria include $\geq 12\%$ and ≥ 200 ml
- D. DLCO is typically normal in asthma
- E. DLCO must be reduced to confirm asthma

Correct answers: A, B, C, D.

25.** A patient cannot perform bronchodilation testing; you consider provocation tests. Which are listed?

- A. Histamine
- B. Methacholine
- C. Effort (exercise)
- D. FEV1 reduction by 20% is used
- E. No medical supervision required

Correct answers: A, B, C, D.

26.** A farmer develops chills, fever, malaise and dyspnea a few hours after exposure; symptoms remit after avoidance.

Which fits hypersensitivity pneumonitis?

- A. Acute form occurs hours after exposure
- B. Associated with antigen inhalation
- C. Remits within hours/days if exposure stops
- D. Always responds to bronchodilators only
- E. Can be occupational/hobby-related

Correct answers: A, B, C, E.

27.** A patient with chronic progressive dyspnea, dry cough, fatigue, weight loss, and poor response to antigen avoidance. Which are consistent with chronic hypersensitivity pneumonitis?

- A. Gradual onset
- B. Progressive dyspnea
- C. Dry cough
- D. Progression to pulmonary fibrosis and hypoxemic respiratory failure
- E. Rapid remission within hours

Correct answers: A, B, C, D.

28.** CT in suspected hypersensitivity pneumonitis shows ground-glass areas and centrilobular nodules; traction bronchiectasis is present. Which match lecture CT features?

- A. Ground-glass ("frosted glass")
- B. Centrilobular nodules
- C. Reticular pattern
- D. Traction bronchiectasis
- E. "Seal ring" sign as key feature

Correct answers: A, B, C, D.

29.** Bronchoalveolar lavage shows lymphocytosis with CD4/CD8 ratio <1 in suspected hypersensitivity pneumonitis. Which additional items support diagnosis per lecture?

- A. Exposure history to causative antigen
- B. High specific IgG
- C. Spirometry can be obstructive or restrictive
- D. Always normal chest imaging
- E. Chest X-ray may show microreticulonodular pattern

Correct answers: A, B, C, E.

30.** A patient has chronic productive cough with fetid, abundant morning sputum (>100 ml/day), worse in certain positions, and recurrent infections. Which fit bronchiectasis features?

- A. Bronchorrhea with stratified fetid sputum
- B. More abundant in the morning
- C. Favored by certain positions
- D. Recurrent febrile episodes
- E. This pattern is typical of acute coryza

Correct answers: A, B, C, D.

31.** A patient with bronchiectasis reports hemoptysis; you recall mechanisms described. Which statements fit?

- A. Varicose veins in dilated bronchi may rupture causing hemoptysis
- B. Hemoptysis can be massive via bronchial artery rupture
- C. Hemoptysis is impossible in bronchiectasis
- D. Hemoptysis may occur as expectoration
- E. Hemoptysis is specific for lung cancer only

Correct answers: A, B, D.

32.** Physical exam in bronchiectasis shows clubbing and localized subcrepitant rales; later there is wheezing and hyperinflation signs. Which are correct?

- A. Clubbing can be present
- B. Postural drainage position may be adopted
- C. Circumscribed bullous subcrepitant rales can occur
- D. Disseminated bronchial rales/wheezing may occur in advanced forms
- E. Findings are always absent

Correct answers: A, B, C, D.

33.** In bronchiectasis, common organisms isolated include which?

- A. *Staphylococcus aureus*
- B. *Pseudomonas aeruginosa*
- C. *Haemophilus influenzae*
- D. *Klebsiella pneumoniae*
- E. *Mycoplasma pneumoniae* (listed as common)

Correct answers: A, B, C, D.

34.** A CT shows bronchial diameter $\geq 1.5 \times$ adjacent vessel ("seal ring"), plus "tree in bud." Which diagnosis and statements match?

- A. These CT signs are described for bronchiectasis
- B. "Seal ring" sign reflects dilated bronchi vs adjacent vessel
- C. "Tree in bud" is listed
- D. Tubular structures < 1 cm from pleura may be seen
- E. These are defining signs of pneumothorax

Correct answers: A, B, C, D.

35.** A patient with bronchiectasis has frequent exacerbations and is colonized with *Pseudomonas aeruginosa*. Which prognosis statements fit?

- A. *Pseudomonas* colonization has negative prognosis
- B. Prognosis depends on frequency of exacerbations and comorbidities
- C. Prognosis is always excellent
- D. Amyloidosis is a listed complication
- E. Chronic cor pulmonale may develop

Correct answers: A, B, D, E.

36.** A 16-year-old has recurrent respiratory infections with very viscous secretions and severe bronchiectasis; history suggests cystic fibrosis. Which statements match lecture description?

- A. Autosomal recessive exocrinopathy affecting multiple epithelia
- B. CFTR gene defect encoding chloride channel
- C. Respiratory manifestations drive morbidity/mortality
- D. Colonization with *S. aureus* and *P. aeruginosa* is described
- E. CF is an autosomal dominant disease

Correct answers: A, B, C, D.

37.** A CF patient has malabsorption, weight loss, and diabetes; which are pancreatic manifestations listed?

- A. Destruction of pancreas with fibrosis and fatty replacement
- B. Malabsorption of fat-soluble vitamins
- C. Diabetes (about 30%)
- D. Wirsung canal obstruction
- E. Hyperthyroidism as classic pancreatic manifestation

Correct answers: A, B, C, D.

38.** A CF patient develops male infertility; which mechanism is listed?

- A. Involution of the vas deferens
- B. Testicular torsion as main cause
- C. Male infertility in 99% of cases
- D. Ileus meconial occurs in newborns
- E. CF excludes biliary obstruction

Correct answers: A, C, D.

39.** A 68-year-old former smoker presents with chronic cough, weight loss, and fatigue. Which clinical points are highlighted for bronchopulmonary cancer?

- A. Often detected late (locally advanced/metastatic)
- B. Weight loss >5 kg can occur
- C. History of chronic cough/COPD can be present
- D. It occurs only in people <40 years
- E. Both sexes can be affected equally (noted in presentation context)

Correct answers: A, B, C, E.

40.** A patient with lung cancer risk factors reports occupational asbestos exposure and radon exposure history. Which are listed risk factors?

- A. Asbestos
- B. Radon exposure
- C. Nickel and hexavalent chromium
- D. Ionizing radiation
- E. Seafood ingestion

Correct answers: A, B, C, D.

Assertion-reason questions

All the questions from this paragraph will follow the standard format: A is an assertion, R is a reason. Options: A/B/C/D/E. You have to choose which option represents the correct answer.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

1. A: Acute coryza is most commonly caused by viral infections.
R: Rhinoviruses are the most frequent etiological agents.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A

2. A: Immunity after acute coryza is long-lasting.
R: Specific immunity lasts only a short time.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: D

3. A: Purulent rhinorrhea in acute coryza suggests microbial superinfection.
R: Viral infections typically cause purulent secretions.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: C

4. A: Dysphonia and hoarseness may appear during upper respiratory tract infections.

R: Laryngeal involvement can occur in acute coryza.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A

5. A: Barking cough is a characteristic symptom of tracheal syndrome.

R: Tracheal inflammation or obstruction produces a harsh cough.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A

6. A: Inspiratory stridor indicates upper airway obstruction.

R: Stridor is produced by turbulent airflow through a narrowed upper airway.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A

7. A: Tracheal syndrome may be caused by extrinsic compression.

R: Mediastinal tumors can compress the trachea.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A

8. A: Spirometry in tracheal obstruction shows a linear flow-volume curve.

R: Fixed large airway obstruction alters both inspiratory and expiratory flows.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A

9. A: Asthma is a heterogeneous disease characterized by chronic airway inflammation.

R: Asthma symptoms are associated with variable expiratory airflow limitation.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: B

10. A: Variability of symptoms is a defining feature of asthma.

R: Asthma symptoms vary in time and intensity.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A

11. A: Bronchospasm is part of the pathophysiological triad of asthma.

R: Asthma pathophysiology also includes mucosal edema and mucus hypersecretion.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: B

12. A: Allergic asthma often begins in childhood.

R: It is commonly associated with personal or familial atopy.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A

13. A: Non-allergic asthma is mediated by IgE-dependent hypersensitivity.

R: Sputum examination may show neutrophilic inflammation.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: D

14. A: Cough may be the only manifestation of asthma.

R: Cough-variant asthma exists as a clinical phenotype.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A

15. A: Adult-onset asthma is more common in women.

R: Adult-onset asthma tends to be non-allergic.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: B

16. A: Atopy is a major risk factor for asthma.
R: Atopy is associated with allergic rhinitis in most asthma cases.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A

17. A: Excessive hygiene reduces the risk of asthma.
R: Reduced endotoxin exposure maintains Th2 predominance.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: D

18. A: Vitamin D deficiency may increase asthma risk.
R: Dietary deficiencies influence immune regulation.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A

19. A: Obesity is a recognized risk factor for asthma.
R: A BMI over 30 kg/m^2 is associated with increased asthma risk.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A

20. A: Aspirin may trigger asthma attacks.

R: Aspirin affects leukotriene pathways.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A

21. A: Cold air can precipitate asthma attacks.

R: Cold air induces hyperventilation and airway irritation.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A

22. A: Premenstrual worsening of asthma may occur.

R: Hormonal variations influence airway responsiveness.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A

23. A: The early asthmatic response peaks within minutes after antigen exposure.

R: Mast cell mediator release leads to bronchospasm.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A

24. A: Late asthmatic response contributes to airway remodeling.

R: Eosinophil mediators stimulate fibroblast proliferation.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A

25. A: Air trapping increases intrathoracic pressure in asthma.

R: Obstructed expiration leads to hyperinflation.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A

26. A: Early asthma attacks are associated with respiratory alkalosis.

R: Hyperventilation lowers PaCO_2 .

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A

27. A: Severe asthma attacks may cause respiratory acidosis.

R: Respiratory muscle exhaustion leads to CO_2 retention.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A

28. A: Asthma attacks often occur at night.
R: Circadian variations influence airway tone.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: B

29. A: Pearly sputum is characteristic of allergic asthma.
R: It reflects mucus hypersecretion without infection.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A

30. A: Diffuse pulmonary hyperresonance is found during asthma crisis.
R: Pulmonary hyperinflation increases resonance.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A

31. A: In severe asthma crisis, patients may be unable to speak full sentences.
R: Severe airflow limitation impairs ventilation.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A

32. A: Status asthmaticus is unresponsive to usual therapy.
R: It is defined as an attack lasting more than 24 hours.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: B

33. A: DLCO is typically reduced in asthma.
R: Alveolar-capillary membrane is destroyed.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: E

34. A: Bronchodilator reversibility supports asthma diagnosis.
R: FEV₁ increases by $\geq 12\%$ and ≥ 200 ml after salbutamol.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A

35. A: Histamine provocation testing may be used in asthma diagnosis.
R: It assesses airway hyperresponsiveness.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A

36. A: Hypersensitivity pneumonitis is caused by inhaled antigens.

R: It produces inflammatory alveolar and small airway responses.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A

37. A: Chronic hypersensitivity pneumonitis may progress to pulmonary fibrosis.

R: Persistent antigen exposure induces irreversible lung damage.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A

38. A: Bronchiectasis is characterized by irreversible bronchial dilation.

R: Destruction of elastic and muscular components occurs.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A

39. A: Colonization with *Pseudomonas aeruginosa* worsens bronchiectasis prognosis.

R: It increases exacerbation frequency and severity.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A

40. A: Bronchopulmonary cancer often presents late.

R: Early stages are frequently asymptomatic.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A

Difficult questions

1. A 28-year-old woman with known allergic asthma presents to the emergency department at 3 a.m. with acute dyspnea. She reports sudden onset of chest tightness and wheezing that woke her from sleep. On examination, she is anxious, tachypneic (28 breaths/min), with prolonged expiration and diffuse wheezing. Initially, her cough is dry and irritating. After bronchodilator therapy, her breathing improves and she begins to expectorate a small amount of pearly, mucoid sputum. Peak expiratory flow rate is 45% of predicted at presentation.

Which of the following statements are TRUE?

- A. Hyperpnea and wheezing are typical findings at the onset of an asthma attack.
- B. Productive cough with mucoid sputum is more characteristic toward the end of the asthma attack.
- C. Cough is usually absent throughout an asthma exacerbation.
- D. A PEFR value below 50% of predicted indicates a severe asthma exacerbation.
- E. The appearance of productive cough at the end of the crisis excludes asthma as the diagnosis.

Correct answers: A, B, D.

2.* A patient with tracheal obstruction shows a linear flow-volume loop. This pattern is best explained by:

- A. Variable intrathoracic obstruction
- B. Small airway disease
- C. Restrictive lung disease
- D. Dynamic airway collapse
- E. Fixed large airway obstruction

Correct answer: E

3. Which findings support mechanical tracheal obstruction rather than asthma?

- A. Inspiratory stridor
- B. Linear spirometric curve
- C. Barking cough
- D. Expiratory wheezing only
- E. Bronchodilator reversibility

Correct answers: A, B, C

4.* Which feature most strongly differentiates asthma from COPD in early disease?

- A. Presence of cough
- B. Smoking history
- C. Variable airflow obstruction
- D. Wheezing
- E. Dyspnea on exertion

Correct answer: C

5. Which mechanisms contribute to early hypoxemia without CO₂ retention in asthma?

- A. Uneven ventilation-perfusion ratios
- B. Hyperventilation
- C. Air trapping
- D. Alveolar destruction
- E. Increased PaCO₂

Correct answers: A, B, C

6.* The most reliable indicator of life-threatening asthma is:

- A. Wheezing
- B. Tachycardia
- C. Orthopnea
- D. PEFR <33% of predicted
- E. Prolonged expiration

Correct answer: D

7. Which features suggest status asthmaticus rather than severe asthma crisis?

- A. Duration >24 hours
- B. Respiratory silence
- C. Rapid response to bronchodilators
- D. Hypercapnia
- E. Normal mental status

Correct answers: A, B, D

8.* A normal DLCO in a patient with airflow obstruction most strongly suggests:

- A. Pulmonary fibrosis
- B. Emphysema
- C. Asthma
- D. Pulmonary embolism
- E. Interstitial lung disease

Correct answer: C

9. Which findings favor allergic asthma over non-allergic asthma?

- A. Childhood onset
- B. Eosinophils in sputum
- C. Elevated IgE
- D. Neutrophilic inflammation
- E. Paucigranulocytic sputum

Correct answers: A, B, C

10.* The hygiene hypothesis explains asthma risk primarily through:

- A. Increased bacterial exposure
- B. Reduced Th1 stimulation
- C. Increased IgA production
- D. Mast cell depletion
- E. Reduced viral infections

Correct answer: B

11. Which factors are specifically linked to occupational asthma?

- A. Flour exposure
- B. Improvement during holidays
- C. Immediate onset after first exposure
- D. Toluene diisocyanate
- E. Viral upper respiratory infections

Correct answers: A, B, D

12.* A cough that is dry at onset and becomes productive with pearly sputum at resolution is typical of:

- A. Acute bronchitis
- B. Pneumonia
- C. Lung cancer
- D. Asthma attack
- E. Pulmonary edema

Correct answer: D

13. Which signs indicate respiratory muscle exhaustion in asthma?

- A. Rising PaCO₂
- B. Decreasing tidal volume
- C. Respiratory alkalosis
- D. Bradycardia
- E. Hyperinflated thorax

Correct answers: A, B, D

14.* Which symptom most strongly suggests tracheal rather than bronchial pathology?

- A. Wheezing
- B. Cough
- C. Inspiratory stridor
- D. Dyspnea
- E. Chest tightness

Correct answer: C

15. Which CT findings support hypersensitivity pneumonitis rather than idiopathic pulmonary fibrosis?

- A. Ground-glass opacities
- B. Centrilobular nodules
- C. Honeycombing only
- D. Traction bronchiectasis
- E. Upper-lobe emphysema

Correct answers: A, B, D

16.* The key immunological finding in bronchoalveolar lavage in hypersensitivity pneumonitis is:

- A. Neutrophilia
- B. Eosinophilia
- C. CD4/CD8 ratio >2
- D. Lymphocytosis with CD4/CD8 <1
- E. Mast cell predominance

Correct answer: D

17. Which features differentiate chronic hypersensitivity pneumonitis from the acute form?

- A. Progressive dyspnea
- B. Weight loss
- C. Rapid remission after exposure cessation
- D. Pulmonary fibrosis
- E. Dry cough

Correct answers: A, B, D

18.* The most characteristic sputum feature of bronchiectasis is:

- A. Pearly mucus
- B. Bloody froth
- C. Abundant fetid sputum
- D. Dry cough without expectoration
- E. Rust-colored sputum

Correct answer: C

19. Which findings suggest advanced bronchiectasis?

- A. Clubbing
- B. Disseminated wheezing
- C. Normal spirometry
- D. Pulmonary hyperinflation
- E. Early-morning sputum only

Correct answers: A, B, D

20.* The CT "seal ring sign" reflects:

- A. Alveolar collapse
- B. Bronchial wall thickening
- C. Bronchial diameter exceeding adjacent artery
- D. Mucus plugging
- E. Peribronchial fibrosis only

Correct answer: C

21. Which factors worsen the prognosis of bronchiectasis?

- A. Colonization with *Pseudomonas aeruginosa*
- B. Frequent exacerbations
- C. Young age at diagnosis
- D. Presence of comorbidities
- E. Mild localized disease

Correct answers: A, B, D

22.* The most frequent cause of hemoptysis in bronchiectasis is:

- A. Pulmonary embolism
- B. Rupture of bronchial arteries
- C. Alveolar hemorrhage
- D. Pleural inflammation
- E. Pulmonary hypertension

Correct answer: B

23. Which findings support cystic fibrosis-related bronchiectasis?

- A. Early onset
- B. CFTR gene mutation
- C. Autosomal dominant inheritance
- D. Colonization with *P. aeruginosa*
- E. Male infertility

Correct answers: A, B, D

24.* The primary cause of morbidity and mortality in cystic fibrosis is:

- A. Liver cirrhosis
- B. Pancreatitis
- C. Respiratory involvement
- D. Diabetes
- E. Intestinal obstruction

Correct answer: C

25. Which pancreatic manifestations occur in cystic fibrosis?

- A. Fat-soluble vitamin malabsorption
- B. Pancreatic fibrosis
- C. Hyperinsulinism
- D. Diabetes mellitus
- E. Acute viral hepatitis

Correct answers: A, B, D

26.* A lung cancer patient with shoulder pain radiating to the arm and Horner syndrome most likely has:

- A. Small cell carcinoma
- B. Central squamous carcinoma
- C. Pancoast tumor
- D. Pulmonary metastases
- E. Mediastinal lymphoma

Correct answer: C

27. Which features suggest advanced bronchopulmonary cancer?

- A. Weight loss
- B. Paraneoplastic syndromes
- C. Early asymptomatic stage
- D. Lymphadenopathy
- E. Painful hepatomegaly

Correct answers: A, B, D

28.* The most common presenting symptom of bronchopulmonary cancer is:

- A. Dyspnea
- B. Hemoptysis
- C. Chest pain
- D. Cough
- E. Fever

Correct answer: D

29. Which exposures are established lung cancer risk factors?

- A. Asbestos
- B. Radon
- C. Diesel particles
- D. Ionizing radiation
- E. Pollen

Correct answers: A, B, D

30.* Which imaging modality is the method of choice for lung cancer evaluation?

- A. Chest X-ray
- B. MRI
- C. PET alone
- D. Pulmonary CT
- E. Ultrasound

Correct answer: D

31. Which diagnostic procedures provide histological confirmation of lung cancer?

- A. Bronchoscopy with biopsy
- B. Sputum cytology
- C. Transbronchial biopsy
- D. PET-CT
- E. Thoracentesis with cytology

Correct answers: A, C, E

32.* A negative sputum cytology in lung cancer requires:

- A. Immediate surgery
- B. No further testing
- C. Repetition at least three times
- D. PET-CT only
- E. DLCO measurement

Correct answer: C

33. Which findings suggest mediastinal invasion by lung cancer?

- A. Dysphagia
- B. Hoarseness
- C. Superior vena cava syndrome
- D. Wheezing only
- E. Axillary lymphadenopathy

Correct answers: A, B, C

34.* The lung cancer subtype with the highest metastatic rate is:

- A. Adenocarcinoma
- B. Squamous cell carcinoma
- C. Large cell carcinoma
- D. Small cell carcinoma
- E. Carcinoid tumor

Correct answer: D

35. Which metastatic sites are commonly mentioned for lung cancer?

- A. Brain
- B. Spine
- C. Bone marrow
- D. Thyroid
- E. Skin

Correct answers: A, B, C

36.* A patient with lung cancer develops paradoxical pulse and hypotension. This most likely indicates:

- A. Pulmonary embolism
- B. Cardiac tamponade
- C. Pneumothorax
- D. COPD exacerbation
- E. Sepsis

Correct answer: B

37. Which features characterize paraneoplastic syndromes in lung cancer?

- A. Acanthosis nigricans
- B. Migratory thrombophlebitis
- C. Clubbing
- D. Weight gain
- E. Endocrine disorders

Correct answers: A, B, C

38.* The earliest physiologic abnormality in asthma pathogenesis is:

- A. Fibrosis
- B. Mucus plugging
- C. Bronchospasm
- D. Alveolar collapse
- E. Hypoxemia

Correct answer: C

39. Which processes contribute to airway remodeling in asthma?

- A. Fibroblast proliferation
- B. Eosinophil mediator release
- C. Ciliated epithelial damage
- D. Immediate bronchodilation
- E. Mucus plugging

Correct answers: A, B, C

40.* A patient with asthma develops respiratory acidosis. This finding implies:

- A. Mild disease
- B. Effective ventilation
- C. Imminent respiratory failure
- D. Hyperventilation
- E. Normal gas exchange

Correct answer: C

Chapter VII. Semiology of Pneumonia, Pleural pathology, Mediastinum pathology

Ruxandra Christodorescu, Ciprian Ilie Rosca

Mixed questions

1. A 59-year-old man presents with chronic sputum production, dyspnea, and frequent winter exacerbations. His cough has been productive for at least three months per year for the last two years. What is the most likely diagnosis?

- A. Asthma
- B. Chronic bronchitis
- C. Bronchiectasis
- D. COPD with emphysema predominance
- E. Upper airway cough syndrome

Correct answer: B

2. A patient presents with "clubbing" of the fingers. Which condition is most strongly associated with this finding?

- A. Acute bronchitis
- B. Asthma
- C. Lung cancer
- D. Viral pneumonia
- E. COPD exacerbation

Correct answer: C

3. A 70-year-old man complains of progressive dyspnea. On examination, percussion over the right lower lung zone is dull and tactile fremitus is decreased. Which diagnosis is most compatible?

- A. Emphysema
- B. Large pleural effusion
- C. Pneumothorax
- D. Asthma attack
- E. Massive atelectasis

Correct answer: B

4. A patient presents with sudden-onset sharp chest pain worsened by deep inspiration. Physical exam reveals a pleural friction rub. What is the most likely cause?

- A. Pulmonary edema
- B. Pneumothorax
- C. Pleural inflammation
- D. Asthma
- E. Bronchiolitis

Correct answer: C

5. A 45-year-old smoker has chronic cough and recurrent purulent sputum. Auscultation reveals coarse crackles over the lower lobes. Which condition is most likely?

- A. Viral tracheitis
- B. COPD
- C. Bronchiectasis
- D. Pulmonary fibrosis
- E. Tuberculosis

Correct answer: C

6. Community-acquired pneumonia (CAP) is typically defined as pneumonia in:

- A. Patients who develop pneumonia >48h after admission
- B. Previously healthy persons, acquired in the community
- C. Patients on mechanical ventilation
- D. Patients institutionalized in palliative care centers
- E. Patients with Gram-negative germs in >80% of cases

Correct answer: B

7. Nosocomial pneumonia (HAP) occurs:

- A. Within 24h of admission
- B. At >48h after admission
- C. Only in immunocompetent patients
- D. Only due to pneumococcus
- E. Only in outpatients with recent hemodialysis

Correct answer: B

8. In HAP, the infectious agents are most commonly:

- A. Viruses
- B. Fungi
- C. Gram-negative germs (>80%)
- D. Pneumococcus (50-75%)
- E. Parasites

Correct answer: C

9. Healthcare-associated pneumonia (HCAP) includes which patient category?

- A. No medical contact in the last year
- B. Hospitalized in the last 90 days for an acute event
- C. Healthy student with mild cough
- D. Community athlete with no comorbidity
- E. Child with viral pneumonia predominance

Correct answer: B

10. The most common cause of bacterial pneumonia in the lecture is:

- A. *Staphylococcus aureus*
- B. *Klebsiella pneumoniae*
- C. *Streptococcus pneumoniae*
- D. *Legionella pneumophila*
- E. *Haemophilus influenzae*

Correct answer: C

11. "Veterans pneumonia" refers to infection with:

- A. *Coxiella burnetti*
- B. *Legionella pneumophila*
- C. *Chlamydia psittaci*
- D. *Mycoplasma pneumoniae*
- E. ECHO virus

Correct answer: C

12. Aspiration pneumonia is classically associated with:

- A. Anaerobic pathogens
- B. Only viruses
- C. Only fungi
- D. Only pneumococcus
- E. Only parasites

Correct answer: A

13. Primary atypical pneumonia is most classically due to:

- A. *Klebsiella pneumoniae*
- B. *Mycoplasma pneumoniae*
- C. *Staphylococcus aureus*
- D. *Pneumococcus*
- E. *E. coli*

Correct answer: B

14. Interstitial pneumonia is most typically associated with:

- A. *Pneumococcus* only
- B. *Klebsiella* only
- C. *Mycoplasma* and viruses
- D. Anaerobes only
- E. *Staphylococcus* only

Correct answer: C

15. Lobar (alveolar) pneumonia is commonly caused by:

- A. Mycoplasma pneumoniae
- B. Viruses only
- C. Pneumococcus or Klebsiella pneumoniae
- D. Coxsackie virus
- E. Pneumocystis carinii

Correct answer: C

16. In children, pneumonia most commonly predominates as:

- A. Gram-negative pneumonia
- B. Viral pneumonia
- C. Pneumococcal pneumonia
- D. Fungal pneumonia
- E. Anaerobic aspiration pneumonia

Correct answer: B

17. Pneumonia caused by Gram germs predominates in the elderly, usually:

- A. Pneumococcus and Mycoplasma
- B. Haemophilus influenzae and Klebsiella pneumoniae
- C. Candida and Aspergillus
- D. Coxsackie and ECHO
- E. Chlamydia psittaci and Coxiella burnetti

Correct answer: B

18. Q fever pneumonia risk is higher in:

- A. Poultry farmers
- B. Animal breeders and butchers
- C. Office workers
- D. Teachers
- E. Professional swimmers

Correct answer: B

19. Psittacosis (parrot fever) risk is higher in:

- A. Poultry farmers
- B. Coal miners
- C. Taxi drivers
- D. Bakers
- E. Software engineers

Correct answer: A

20. Air-conditioning systems are linked in the lecture to:

- A. Tuberculosis
- B. Legionellosis
- C. Pneumococcal pneumonia
- D. Psittacosis
- E. Pneumocystis pneumonia

Correct answer: B

21. Recurrent pneumonia with the same localization suggests:

- A. Chronic bronchitis
- B. Bronchiectasis
- C. Bronchopulmonary neoplasm
- D. Viral pneumonia
- E. Q fever

Correct answer: C

22. Aspiration of gastric contents or foreign bodies is especially noted after:

- A. Mild exercise
- B. Convulsions or coma
- C. Seasonal allergy
- D. Hyperventilation syndrome
- E. Brief insomnia

Correct answer: B

23. A sudden onset is more typical for:

- A. Viral pneumonia
- B. Atypical pneumonia (Mycoplasma)
- C. Fungal pneumonia
- D. Bacterial pneumonia
- E. Parasitic pneumonia

Correct answer: D

24. Graded onset is typical for all EXCEPT:

- A. Viral pneumonia
- B. Fungal pneumonia
- C. Parasitic pneumonia
- D. Atypical pneumonia (Mycoplasma)
- E. Classic bacterial pneumonia

Correct answer: E

25. A "unique, solemn chill" suggests:

- A. Pneumococcal pneumonia
- B. Staphylococcal pneumonia
- C. Gram-negative pneumonia
- D. Viral pneumonia
- E. Fungal pneumonia

Correct answer: A

26. Repeated chills suggest:

- A. Mycoplasma pneumonia
- B. Pneumococcal pneumonia only
- C. Staphylococcal pneumonia or Gram-negative pneumonia
- D. Viral pneumonia only
- E. Pneumocystis pneumonia

Correct answer: C

27. Pneumococcal pneumonia fever pattern described is:

- A. Intermittent hectic fever
- B. Remittent 38-39°C only
- C. Continuous "plateau" fever up to 39.5°C
- D. Afebrile in all cases
- E. Only low-grade fever <37.8°C

Correct answer: C

28. Staphylococcal pneumonia fever is described as:

- A. Continuous plateau fever
- B. Intermittent, hectic fever
- C. No fever
- D. Only remittent low fever
- E. Irregular fever only in Haemophilus infections

Correct answer: B

29. "Rust" sputum (hemolyzed blood, container-adherent) is typical of:

- A. Gram-negative pneumonia
- B. Pneumococcal pneumonia
- C. Mycoplasma pneumonia
- D. Influenza pneumonia
- E. Tuberculosis

Correct answer: B

30. Purulent sputum with streaks of blood suggests:

- A. Staphylococcal pneumonia
- B. Pneumococcal pneumonia
- C. Mycoplasma pneumonia
- D. Q fever pneumonia
- E. Viral pneumonia

Correct answer: A

31. Mucous sputum is described in pneumonia with:

- A. Pneumococcus
- B. Mycoplasma
- C. Klebsiella
- D. Staphylococcus
- E. Anaerobes

Correct answer: B

32. Dyspnea described as "interrupted, jerky breathing" occurs when:

- A. Pleural pain is present
- B. There is no chest pain
- C. Only in viral pneumonia
- D. Only in fungal pneumonia
- E. Only in COPD Type A

Correct answer: A

33. In bronchopneumonia, dyspnea is described with:

- A. Bradypnea and stridor
- B. Tachypnea and "flapping of the wings" of the nose
- C. Normal respiratory rate always
- D. Kussmaul breathing
- E. Cheyne-Stokes pattern

Correct answer: B

34. The Jaccoud sign (as described) refers to:

- A. Clubbing in chronic suppuration
- B. Most congested cheekbone on the pneumonia side
- C. Pleural rub audible only in right decubitus
- D. Metallic click in hydropneumothorax
- E. Bitonal voice in recurrent nerve palsy

Correct answer: B

35. Pneumococcal pneumonia agent is described as:

- A. Gram-negative coccobacillus
- B. Gram-positive bacteria arranged in pairs
- C. Acid-fast bacillus
- D. Fungus with hyphae
- E. Parasite in cyst form

Correct answer: B

36. In pneumococcal pneumonia (condensation syndrome with free bronchus), percussion typically shows:

- A. Hyperresonance
- B. Tympanism
- C. Dullness
- D. Normal resonance always
- E. "Woody" dullness with shifting level

Correct answer: C

37. In pneumococcal pneumonia, voice transmission findings can include:

- A. Only absent vocal resonance
- B. Bronchophony and aphone pectoriloquy
- C. Only egophony at apex
- D. Only whispered pectoriloquy absent
- E. Only metallic tinkling

Correct answer: B

38. In pneumococcal pneumonia, added sounds classically include: (p.19)

- A. Pleural rub only
- B. Crackling rales around the tubal murmur ("crown")
- C. Continuous wheeze only
- D. Stridor only
- E. Amphoric breathing only

Correct answer: B

39. Laboratory in pneumococcal pneumonia may show:

- A. Leukocytosis $>15,000/\text{mm}^3$
- B. Always leukopenia
- C. Always normal sodium
- D. Always high albumin
- E. Polycythemia as a defining feature

Correct answer: A

40. In pneumococcal pneumonia, leukopenia is described as:

- A. A sign of favorable prognosis
- B. A sign of unfavorable prognosis
- C. Specific for fungal infection
- D. Diagnostic of pleural effusion
- E. Pathognomonic for COPD

Correct answer: B

Progressive questions

1. Which findings are typical of chronic bronchitis? (Select all that apply.)
 - A. Productive cough
 - B. Hyperinflated chest
 - C. Cyanosis
 - D. Prolonged expiration
 - E. Increased sputum volume

Correct answers: A, C, E

2. Which clinical signs suggest pulmonary consolidation? (Select all that apply.)
 - A. Bronchial breath sounds
 - B. Decreased tactile fremitus
 - C. Hyperresonance
 - D. Egophony
 - E. Late inspiratory crackles

Correct answers: A, D, E

3. Which findings are consistent with pleural effusion during physical exam? (Select all that apply.)
 - A. Diminished tactile fremitus
 - B. Stony dull percussion
 - C. Increased vocal resonance
 - D. Decreased breath sounds
 - E. Mediastinal shift away from the effusion (large)

Correct answers: A, B, D, E

4. Which symptoms suggest bronchiectasis? (Select all that apply.)
 - A. Chronic productive cough
 - B. Sudden severe dyspnea
 - C. Large-volume purulent sputum
 - D. Recurrent infections
 - E. Coarse crackles

Correct answers: A, C, D, E

5. Which causes are associated with digital clubbing? (Select all that apply.)

- A. Lung cancer
- B. Bronchiectasis
- C. Cystic fibrosis
- D. Acute asthma
- E. Interstitial lung disease

Correct answers: A, B, C, E

6. Criteria defining community-acquired pneumonia (CAP) include:

- A. Occurs in previously healthy persons
- B. Acquired in the community
- C. Appears >48h after admission
- D. Caused mainly by Gram-negative germs
- E. Patient usually has normal immunity

Correct answer: A, B, E

7. Features of nosocomial (hospital-acquired) pneumonia are:

- A. Onset after 48 hours of hospitalization
- B. Predominantly Gram-negative pathogens
- C. Occurs only in immunocompetent patients
- D. Often associated with immune deficiency
- E. Acquired exclusively outside hospitals

Correct answers: A, B, D

8. Healthcare-associated pneumonia (HCAP) includes patients who:

- A. Received IV treatment in the last 30 days
- B. Were hospitalized in the last 90 days
- C. Visit outpatient clinics frequently
- D. Are children with viral pneumonia
- E. Are completely healthy with no medical contact

Correct answers: A, B, C

9. Bacterial pneumonia etiology includes:

- A. Streptococcus pneumoniae
- B. Staphylococcus spp.
- C. Klebsiella pneumoniae
- D. Influenza virus
- E. Haemophilus influenzae

Correct answers: A, B, C, E

10. Atypical bacterial pneumonia may be caused by:

- A. Mycoplasma pneumoniae
- B. Chlamydia psittaci
- C. Coxiella burnetti
- D. Streptococcus pneumoniae
- E. Legionella pneumophila

Correct answers: A, B, C, E

11. Viral pneumonias mentioned in the lecture include:

- A. Influenza viruses
- B. Adenoviruses
- C. Respiratory syncytial virus
- D. Pneumocystis carinii
- E. Cytomegalovirus

Correct answers: A, B, C, E

12. Alveolar (lobar) pneumonia is commonly associated with:

- A. Pneumococcus
- B. Klebsiella pneumoniae
- C. Mycoplasma pneumoniae
- D. Viruses
- E. Segmental or lobar distribution

Correct answers: A, B, E

13. Interstitial pneumonia is typical for infections with:

- A. Mycoplasma pneumoniae
- B. Viruses
- C. Pneumococcus
- D. Legionella
- E. Coxiella burnetti

Correct answer: A, B, D, E

14. In adults, pneumonia most frequently encountered includes:

- A. Pneumococcal pneumonia
- B. Atypical pneumonia
- C. Viral pneumonia exclusively
- D. Gram-negative pneumonia predominance
- E. Parasitic pneumonia

Correct answers: A, B

15. In elderly patients, pneumonia is often caused by:

- A. Haemophilus influenzae
- B. Klebsiella pneumoniae
- C. Pneumocystis carinii
- D. Gram-negative germs
- E. Influenza virus only

Correct answers: A, B, D

16. Occupational risk factors for specific pneumonias include:

- A. Q fever in animal breeders
- B. Psittacosis in poultry farmers
- C. Fungal pneumonia in construction workers
- D. Pneumococcus in office workers
- E. Legionellosis in air-conditioning exposure

Correct answers: A, B, C, E

17. Conditions that reduce respiratory defense mechanisms include:

- A. Chronic bronchitis
- B. Bronchiectasis
- C. Bronchopulmonary neoplasm
- D. Asthma only
- E. Aspiration of gastric contents

Correct answers: A, B, C, E

18. Risk factors related to decreased overall body resistance are:

- A. Alcohol abuse
- B. Smoking
- C. Diabetes mellitus
- D. Immunosuppressive therapy
- E. Athletic training

Correct answers: A, B, C, D

19. Risk factors specific for nosocomial pneumonia include:

- A. Prolonged bed immobilization
- B. Broad-spectrum antibiotics
- C. Invasive procedures
- D. Community exposure
- E. Coma with aspiration

Correct answers: A, B, C, E

20. Pneumonias with graded onset include:

- A. Atypical pneumonia
- B. Viral pneumonia
- C. Fungal pneumonia
- D. Parasitic pneumonia
- E. Classic pneumococcal pneumonia

Correct answers: A, B, C, D

21. Repeated chills are suggestive of:

- A. Staphylococcal pneumonia
- B. Gram-negative pneumonia
- C. Pneumococcal pneumonia
- D. Viral pneumonia
- E. Mycoplasma pneumonia

Correct answers: A, B

22. Fever patterns described for pneumococcal pneumonia include:

- A. Up to 39.5°C
- B. Continuous plateau fever
- C. Hectic intermittent fever
- D. Defervescence influenced by antibiotics
- E. Afebrile course

Correct answers: A, B, D

23. Nonspecific symptoms of pneumonia include:

- A. Asthenia
- B. Loss of appetite
- C. Myalgia
- D. Arthralgia
- E. Massive hemoptysis

Correct answers: A, B, C, D

24. "Rusty" sputum is typical of:

- A. Pneumococcal pneumonia
- B. Hemolyzed blood content
- C. Container-adherent sputum
- D. Staphylococcal pneumonia
- E. Viral pneumonia

Correct answers: A, B, C

25. Purulent sputum with blood streaks suggests:

- A. Staphylococcal pneumonia
- B. Gram-negative pneumonia
- C. Mycoplasma pneumonia
- D. Pneumococcal pneumonia
- E. Viral pneumonia

Correct answers: A, B

26. Dyspnea in pneumonia may be due to:

- A. Pleural pain
- B. Restrictive ventilatory dysfunction
- C. Bronchopneumonia
- D. Increased dead space ventilation
- E. Alveolar condensation

Correct answers: A, B, C, E

27. General physical findings in pneumococcal pneumonia include:

- A. Vultuous febrile facies
- B. Jaccoud sign
- C. Herpes simplex
- D. Cyanosis in massive pneumonia
- E. Digital clubbing

Correct answers: A, B, C, D

28. Pneumococcal pneumonia agent characteristics include:

- A. Gram-positive bacteria
- B. Arranged in pairs
- C. Alpha-hemolysis
- D. Identified by Quellung reaction
- E. Lack of bacterial wall

Correct answers: A, B, C, D

29. Physical signs of pulmonary condensation with free bronchus include:

- A. Dullness on percussion
- B. Accentuated pectoral fremitus
- C. Pathological tubal murmur
- D. Absent vesicular murmur
- E. Bronchophony

Correct answers: A, B, C, E

30. Laboratory findings in pneumococcal pneumonia may include:

- A. Leukocytosis $>15,000/\text{mm}^3$
- B. Leukopenia with poor prognosis
- C. Hyponatremia
- D. High serum albumin
- E. Anemia

Correct answers: A, B, C, E

31. Radiological features of pneumococcal pneumonia include:

- A. Homogeneous opacity
- B. Lobar or segmental distribution
- C. Triangular shape
- D. Air bronchogram
- E. Pneumatoceles

Correct answers: A, B, C, D

32. Positive diagnosis of pneumococcal pneumonia may rely on:

- A. Clinical signs and symptoms
- B. Chest X-ray findings
- C. Blood cultures
- D. Urinary pneumococcal antigen
- E. Spirometry

Correct answers: A, B, C, D

33. Staphylococcal pneumonia is characterized by:

- A. Frequent post-influenza occurrence
- B. High morbidity and mortality
- C. Purulent sputum in large quantities
- D. Pneumatoceles on imaging
- E. Exclusive lobar consolidation

Correct answers: A, B, C, D

34. Radiological findings in staphylococcal pneumonia include:

- A. Diffuse pulmonary infiltrates
- B. Lobular opacities with confluence
- C. Abscess formation
- D. Pleural empyema
- E. Phantom tumor

Correct answers: A, B, C, D

35. *Mycoplasma pneumoniae* characteristics include:

- A. Very small size
- B. Absence of bacterial wall
- C. Resistance to beta-lactams
- D. Independent replication
- E. Gram-positive staining

Correct answers: A, B, C, D

36. Extrapulmonary manifestations of *Mycoplasma pneumonia* include:

- A. Erythema multiforme
- B. Guillain-Barré syndrome
- C. Hemolytic anemia
- D. Pericarditis
- E. Digital clubbing

Correct answers: A, B, C, D

37. Radiological findings in *Mycoplasma pneumonia* may show:

- A. Peribronchial pneumonia
- B. Interstitial accentuation
- C. Subsegmental atelectasis
- D. Basal pleurisy
- E. Cavitary abscess

Correct answers: A, B, C, D

38. Diagnostic tools for *Mycoplasma pneumonia* include:

- A. PCR
- B. IgM serology
- C. IgG serology
- D. Gram stain
- E. CSF testing in selected cases

Correct answers: A, B, C, E

39. Atelectasis represents:

- A. Pulmonary condensation
- B. Collapse of unventilated alveoli
- C. Retractile process
- D. Complete bronchial obstruction
- E. Cavitation of lung tissue

Correct answers: A, B, C, D

40. Causes of secondary atelectasis include:

- A. Bronchopulmonary cancer
- B. Mucus plugs
- C. Aspirated foreign bodies
- D. Pneumothorax
- E. Viral pneumonia

Correct answers: A, B, C, D

Advanced clinical vignettes

1. ** A 66-year-old smoker presents with severe dyspnea, chronic productive cough, and peripheral edema. On exam, he is cyanotic and obese, with normal percussion but diffuse wheezing. Which diagnoses fit this presentation? (Select all that apply.)

- A. "Blue bloater" phenotype of COPD
- B. Cor pulmonale
- C. Severe asthma exacerbation
- D. Chronic bronchitis
- E. Pleural effusion

Correct answers: A, B, D

2. ** A 35-year-old woman reports fever, pleuritic pain, and a new productive cough with rust-colored sputum. On examination: bronchial breathing, increased tactile fremitus, and egophony. Which diagnoses correspond? (Select all that apply.)

- A. Lobar pneumonia
- B. Consolidation
- C. Pulmonary edema
- D. Atelectasis
- E. Lung abscess (early)

Correct answers: A, B, E

3. ** A 50-year-old man presents with sudden-onset dyspnea after intense coughing. Physical exam: hyperresonant percussion, diminished breath sounds on the left, and tracheal deviation to the right. Which conditions match this situation? (Select all that apply.)

- A. Tension pneumothorax
- B. Simple pneumothorax
- C. Pleural effusion
- D. Mediastinal shift
- E. Lung collapse

Correct answers: A, D, E

4. ** 14. A 42-year-old woman has chronic cough, daily thick sputum, and recurrent winter exacerbations. She also has clubbing and coarse crackles at the bases. Which diagnoses must be considered? (Select all that apply.)

- A. Bronchiectasis
- B. Cystic fibrosis (adult form)
- C. Chronic bronchitis
- D. Pulmonary fibrosis
- E. Lung cancer

Correct answers: A, B, E

(Note: Clubbing + chronic purulent sputum → consider bronchiectasis, CF; clubbing also raises suspicion for malignancy.)

5. ** A 77-year-old man with heart failure develops acute orthopnea and crackles at both lung bases. Percussion is dull in the lower zones and breath sounds are decreased. Which diagnoses are most consistent? (Select all that apply.)

- A. Bilateral pleural effusion
- B. Pulmonary edema
- C. Consolidation
- D. Cardiogenic fluid overload
- E. Pneumothorax

Correct answers: A, B, D

6.** A 45-year-old previously healthy man presents with sudden onset of fever (39.5°C), intense chills, pleuritic chest pain, and rusty sputum. Chest X-ray shows a triangular lobar opacity with air bronchogram. Which are consistent with this diagnosis?

- A. Pneumococcal pneumonia
- B. Continuous "plateau" fever
- C. Leukopenia as favorable sign
- D. Rusty sputum
- E. Interstitial radiological pattern

Correct answers: A, B, D

7.** An elderly patient presents with altered general condition but no fever or cough. Chest X-ray reveals lobar consolidation. Which statements apply?

- A. Pneumococcal pneumonia can present this way in elderly
- B. Absence of fever excludes bacterial pneumonia
- C. Presentation may be atypical
- D. Viral pneumonia is most likely
- E. Diagnosis relies only on sputum culture

Correct answers: A, C

8.** A hospitalized patient develops pneumonia 72 hours after admission. Cultures show Gram-negative bacilli. Which features support the diagnosis?

- A. Nosocomial pneumonia
- B. Onset after 48 hours
- C. Gram-negative etiology
- D. Normal immunity expected
- E. Association with invasive procedures

Correct answers: A, B, C, E

9.** A 30-year-old soldier develops gradual onset cough, headache, fever, and later pneumonia during a barracks outbreak. Which are consistent?

- A. Mycoplasma pneumoniae
- B. Incubation of 2-4 weeks
- C. Ineffectiveness of beta-lactams
- D. Gram stain positivity
- E. Possible extrapulmonary manifestations

Correct answers: A, B, C, E

10.**(*) A patient with pneumonia presents with erythema multiforme and hemolytic anemia. Which etiology is most likely?

- A. Mycoplasma pneumoniae
- B. Pneumococcus
- C. Klebsiella pneumoniae
- D. Viral influenza
- E. Pneumocystis carinii

Correct answer: A

11.** A 55-year-old alcoholic develops pneumonia after loss of consciousness. Which pathogens and mechanisms are most likely involved?

- A. Anaerobic bacteria
- B. Aspiration mechanism
- C. Gram-negative bacilli
- D. Viral etiology
- E. Polymicrobial infection

Correct answers: A, B, E

12.** A patient develops pneumonia after influenza, with purulent sputum, respiratory failure, and CT showing pneumatoceles. Which apply?

- A. Staphylococcal pneumonia
- B. Post-viral superinfection
- C. High morbidity and mortality
- D. Lobar homogeneous opacity only
- E. Risk of abscess formation

Correct answers: A, B, C, E

13.**(*) A chest X-ray shows multiple nodular opacities with confluence, separated by normal lung. Which clinical diagnosis fits best?

- A. Staphylococcal bronchopneumonia
- B. Pneumococcal lobar pneumonia
- C. Viral interstitial pneumonia
- D. Pulmonary atelectasis
- E. Pulmonary embolism

Correct answer: A

14.** A patient presents with fever, productive cough, and repeated chills. Which etiologies should be considered?

- A. Staphylococcal pneumonia
- B. Gram-negative pneumonia
- C. Pneumococcal pneumonia
- D. Viral pneumonia
- E. Mycoplasma pneumonia

Correct answers: A, B

15.**(*) A chest X-ray shows a homogeneous opacity with retractile character pulling mediastinum toward the lesion. What is suggested?

- A. Pulmonary atelectasis
- B. Lobar pneumonia
- C. Pleural effusion
- D. Pneumothorax
- E. Lung abscess

Correct answer: A

16.** In atelectasis, which physical exam findings are expected?

- A. Absent vesicular murmur
- B. Absent pectoral fremitus
- C. Hyperresonance
- D. Inspiratory chest retraction
- E. Crackling rales

Correct answers: A, B, D

17.** A sudden massive atelectasis due to foreign body aspiration will likely present with:

- A. Severe dyspnea
- B. Tachypnea
- C. Cyanosis
- D. Gradual asymptomatic course
- E. Restrictive ventilatory dysfunction

Correct answers: A, B, C, E

18.** A patient presents with sudden fever, foul-smelling sputum, and later massive expectoration (vomica). Which diagnosis and stage fit best?

- A. Lung abscess
- B. Open bronchus stage
- C. Closed abscess stage
- D. Pyosclerosis stage
- E. Viral pneumonia

Correct answers: A, B

19.** Which findings support anaerobic lung abscess?

- A. Fetid sputum
- B. Aspiration risk
- C. Putrid odor
- D. Massive hemoptysis always
- E. Polymicrobial flora

Correct answers: A, B, C, E

20.** A chest X-ray shows a cavity with air-fluid level. Which diagnoses are possible?

- A. Open lung abscess
- B. Hydropneumothorax
- C. Closed lung abscess
- D. Pulmonary atelectasis
- E. Lung tumor with cavitation

Correct answers: A, B, E

21.**(*) A patient with chronic suppuration, weight loss, clubbing, and purulent bronchorrhea likely has:

- A. Pyosclerosis stage of lung abscess
- B. Acute pneumonia
- C. COPD exacerbation
- D. Viral pneumonia
- E. Pleural effusion

Correct answer: A

22.**(*) Pleural chest pain that decreases after fluid accumulation suggests:

- A. Pleural effusion
- B. Pneumothorax
- C. Pulmonary embolism
- D. Pachypleuritis
- E. Lung abscess

Correct answer: A

23.** Physical findings of pleural effusion include:

- A. Woody dullness
- B. Abolished pectoral fremitus
- C. Respiratory silence near dullness
- D. Hyperresonance
- E. Egophony

Correct answers: A, B, C, E

24.**(*) A pleural fluid that shifts with position suggests:

- A. Free pleural effusion
- B. Pneumonia
- C. Pachypleuritis
- D. Lung tumor
- E. Atelectasis

Correct answer: A

25.** Which pleural effusions are classified as transudates?

- A. Heart failure
- B. Liver cirrhosis
- C. Nephrotic syndrome
- D. Tuberculosis
- E. Pulmonary embolism

Correct answers: A, B, C

26.** Which conditions cause pleural exudate?

- A. Neoplasms
- B. Tuberculosis
- C. Rheumatoid arthritis
- D. Heart failure
- E. Pancreatitis

Correct answers: A, B, C, E

27.** Light's criteria for exudate include:

- A. Pleural protein / plasma protein >0.5
- B. Pleural LDH / serum LDH >0.6
- C. Pleural LDH $>\frac{2}{3}$ upper normal serum LDH
- D. Pleural glucose <60 mg/dl
- E. Pleural cholesterol >45 mg/dl

Correct answers: A, B, C

28.**(*) A round opacity in an interlobar fissure that disappears after diuretics suggests:

- A. Phantom tumor
- B. Trapped empyema
- C. Lung abscess
- D. Neoplasm
- E. Atelectasis

Correct answer: A

29.** Ultrasound features suggesting pleural empyema include:

- A. Hyperechoic flakes
- B. Fixed fluid level
- C. No positional change
- D. Suggests pus
- E. Thickened pleura only

Correct answers: A, D

30.**(*) A patient with unilateral thoracic retraction, pleural calcifications, and "white" pleural puncture likely has:

- A. Pachypleuritis
- B. Free pleural effusion
- C. Pneumothorax
- D. Lung abscess
- E. Acute pleuritis

Correct answer: A

31.**(*) Sudden chest pain, dyspnea, hyperresonance, and absent breath sounds suggest:

- A. Pneumothorax
- B. Pleural effusion
- C. Pulmonary embolism
- D. Atelectasis
- E. Lung abscess

Correct answer: A

32.** Which findings indicate tension pneumothorax?

- A. Mediastinal shift
- B. Hypotension
- C. Acute respiratory failure
- D. Negative pleural pressure
- E. Medical emergency

Correct answers: A, B, C, E

33.** A valve pneumothorax causes:

- A. Positive pleural pressure
- B. Progressive lung collapse
- C. Mediastinal displacement
- D. Gradual spontaneous resolution
- E. Acute circulatory failure

Correct answers: A, B, C, E

34.** Compression of the recurrent laryngeal nerve causes:

- A. Dysphonia
- B. Bitonal voice
- C. Aphonya always
- D. Stridor
- E. Dysphagia

Correct answers: A, B

35.** Acute mediastinitis may result from:

- A. Esophageal rupture
- B. Digestive endoscopy
- C. Post-sternotomy infection
- D. Viral pneumonia
- E. Descending cervical infections

Correct answers: A, B, C, E

36.** Hamman sign is associated with:

- A. Pneumomediastinum
- B. Synchronous click with heartbeats
- C. Best heard in left lateral decubitus
- D. Pleural effusion
- E. Lung abscess

Correct answers: A, B, C

37.** COPD is defined by:

- A. Chronic respiratory symptoms
- B. Persistent airflow obstruction
- C. Reversible airflow limitation always
- D. Bronchitis and/or emphysema
- E. Absence of exacerbations

Correct answers: A, B, D

38.** Major risk factors for COPD include:

- A. Tobacco smoking
- B. Occupational dust exposure
- C. Biomass exposure
- D. Alpha-1 antitrypsin deficiency
- E. Viral pneumonia

Correct answers: A, B, C, D

39.** "Pink puffer" phenotype is characterized by:

- A. Predominant emphysema
- B. Severe dyspnea
- C. Thin, anxious patient
- D. Frequent exacerbations
- E. Normal or near-normal FEV₁/FVC early

Correct answers: A, B, C, E

40.** "Blue bloater" phenotype includes:

- A. Chronic bronchitis
- B. Cyanosis
- C. Hypercapnia
- D. Right-sided heart failure
- E. Rare exacerbations

Correct answers: A, B, C, D

Assertion-reason questions

All the questions from this paragraph will follow the standard format: A is an assertion, R is a reason. Options: A/B/C/D/E. You have to choose which option represents the correct answer.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

1. **A:** Community-acquired pneumonia usually affects previously healthy individuals.

R: CAP is typically caused by Gram-negative germs in more than 80% of cases.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: C

2. **A:** Nosocomial pneumonia develops more than 48 hours after hospital admission.

R: Hospital-acquired pneumonia is predominantly caused by Gram-negative bacteria.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A

3. **A:** Pneumococcus is the most frequent etiological agent of bacterial pneumonia.

R: Streptococcus pneumoniae accounts for about 90% of bacterial pneumonias.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A

4. **A:** Aspiration pneumonia is commonly caused by anaerobic bacteria.

R: Aspiration introduces gingival anaerobic flora into the lower airways.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A

5. **A:** Interstitial pneumonia is most commonly associated with pneumococcal infection.

R: Pneumococcus preferentially involves the interstitium rather than alveoli.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: E

6. **A:** *Mycoplasma pneumoniae* causes atypical pneumonia with gradual onset.

R: *Mycoplasma pneumoniae* lacks a bacterial cell wall.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: B

7. **A:** Viral pneumonias frequently coexist with bacterial pneumonia.

R: Viral infections may impair respiratory defense mechanisms.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A

8. **A:** In children, viral pneumonia predominates.

R: Children are more frequently exposed to Gram-negative hospital pathogens.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: C

9. **A:** Recurrent pneumonia in the same lung location suggests bronchopulmonary neoplasm.

R: Tumoral obstruction impairs bronchial drainage.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A

10. **A:** A sudden onset of pneumonia is typical for bacterial pneumonia.

R: Bacterial pneumonias provoke intense inflammatory response rapidly.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A

11. **A:** Repeated chills are characteristic of staphylococcal pneumonia.

R: Staphylococcal infections often produce intermittent septic bacteremia.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A

12. **A:** Pneumococcal pneumonia presents with continuous plateau fever.

R: Defervescence depends on timely antibiotic treatment.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: B

13. **A:** Rusty sputum is typical of pneumococcal pneumonia.

R: It contains hemolyzed blood adhering to the container.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A

14. **A:** Dyspnea in bronchopneumonia is often associated with tachypnea.

R: Bronchopneumonia causes restrictive ventilatory dysfunction.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A

15. **A:** The Jaccoud sign refers to unilateral cheek congestion on the affected side.

R: It reflects local inflammatory hyperemia in pneumonia.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A

16. **A:** Pneumococcal pneumonia may present without fever in elderly patients.

R: Elderly patients may have altered immune response.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A

17. **A:** In pneumococcal pneumonia, percussion reveals dullness.

R: Alveolar exudate replaces air in lung parenchyma.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A

18. **A:** Leukopenia in pneumococcal pneumonia indicates poor prognosis.

R: It reflects severe infection and bone marrow exhaustion.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A

19. **A:** Pneumococcal pneumonia produces a triangular opacity on chest X-ray.

R: The base of the opacity is oriented toward the pulmonary hilum.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: C

20. **A:** Staphylococcal pneumonia often follows influenza infection.

R: Viral damage facilitates bacterial superinfection.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A

21. **A:** Pneumatoceles are characteristic of staphylococcal pneumonia.

R: They represent areas of necrosis and abscess formation.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A

22. **A:** *Mycoplasma pneumoniae* is resistant to beta-lactam antibiotics.

R: It lacks a bacterial cell wall.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A

23. **A:** Extrapulmonary manifestations are common in *Mycoplasma pneumoniae*.

R: Immune-mediated mechanisms are involved.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A

24. **A:** Atelectasis represents collapse of unventilated alveoli.

R: It is always caused by pleural effusion.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: C

25. **A:** Sudden massive atelectasis causes severe respiratory symptoms.

R: Acute restrictive ventilatory dysfunction occurs.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A

26. **A:** Lung abscess often follows aspiration in alcoholics.

R: Aspiration introduces anaerobic oral flora.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A

27. **A:** Vomica occurs in the open bronchus stage of lung abscess.

R: The abscess drains into the bronchial tree.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A

28. **A:** Fetid sputum suggests anaerobic infection.

R: Anaerobic metabolism produces putrid odor.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A

29. **A:** Pleural chest pain decreases after fluid accumulation.

R: Fluid separates inflamed pleural layers.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A

30. **A:** Woody dullness on percussion is typical of pleural effusion.
R: Fluid dampens sound transmission.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A

31. **A:** Pleural fluid that shifts with position suggests free pleural effusion.

R: Fibrous pleural thickening allows fluid mobility.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: C

32. **A:** Heart failure commonly produces pleural transudate.

R: Increased hydrostatic pressure drives fluid into pleural space.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A

33. **A:** Light's criteria are used to differentiate exudate from transudate.

R: They compare pleural and serum protein and LDH levels.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A

34. **A:** Phantom tumor disappears after diuretic therapy.
R: It represents fluid trapped in an interlobar fissure.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A

35. **A:** Pachypleuritis leads to thoracic retraction.
R: Fibrous pleural thickening restricts lung expansion.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A

36. **A:** Pneumothorax is defined by air in the pleural cavity.
R: Air abolishes negative pleural pressure.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A

37. **A:** Tension pneumothorax is a medical emergency.
R: Positive pleural pressure compresses mediastinum and heart.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A

38. **A:** Metallic click on auscultation suggests hydropneumothorax.

R: Air-fluid interface generates metallic sounds.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A

39. **A:** COPD is characterized by persistent airflow obstruction.

R: Airflow limitation is usually progressive and not fully reversible.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A

40. **A:** Post-bronchodilator $FEV_1/FVC < 0.7$ confirms COPD diagnosis.

R: Spirometry is essential for diagnosis and grading severity.

- A. Both A and R are true, and R correctly explains A.
- B. Both A and R are true, but R does not explain A.
- C. A is true, R is false.
- D. A is false, R is true.
- E. Both A and R are false

Correct answer: A

Difficult questions

1.* A pleural effusion produces "woody" dullness with an upper limit concave ascending toward the axilla. This upper limit is called:

- A. Scodism
- B. Garland triangle
- C. Grocco-Rauchfuss triangle
- D. Damoiseau curve
- E. Hamman sign

Correct answer: D

2. In pleural effusion syndrome, which named findings are described in the lecture?

- A. Scodism (area of hypersonority above dullness)
- B. Garland triangle (paravertebral triangular submatility above the liquid)
- C. Grocco-Rauchfuss triangle (opposite hemithorax paravertebral dullness)
- D. Jaccoud sign
- E. Damoiseau curve (upper limit ascending to axilla)

Correct answer: A, B, C, E

3.* Pleural fluid becomes visible **only in lateral decubitus** at approximately:

- A. 50-100 ml
- B. 200-300 ml
- C. 500 ml
- D. 1000 ml
- E. >1500 ml

Correct answer: B

4. Chest X-ray features of pleural effusion **>500 ml** include:

- A. Homogeneous opacity
- B. Supracostal intensity
- C. Upper limit concave ascending toward axilla
- D. Hypertransparency without broncho-vascular pattern
- E. Visible only in lateral decubitus

Correct answers: A, B, C

5.* A round/oval opacity along an interlobar cleft that **disappears after diuretic treatment** is called:

- A. Pneumatocele
- B. Phantom tumor
- C. Hydroaerial image
- D. Stellate fibrosis
- E. Air bronchogram

Correct answer: B

6. Pleural puncture is indicated for:

- A. Confirming presence of pleural fluid
- B. Cytological/bacteriological/biochemical characterization
- C. Discharging abundant pleural fluid
- D. Pleural lavage
- E. Diagnosing pneumothorax by creating air leak

Correct answers: A, B, C, D

7. According to the lecture, if **any one** of the listed criteria is present, the pleural fluid is an exudate. This refers to:

- A. Rivalta test
- B. Light's criteria
- C. Wells score
- D. CURB-65
- E. GOLD grading

Correct answer: B

8. Light's criteria for exudate in the lecture include:

- A. Pleural proteins / plasma proteins > 0.5
- B. Pleural LDH / serum LDH > 0.6
- C. Pleural LDH $> 2/3$ upper limit of normal serum LDH
- D. Pleural glucose < 60 mg/dl
- E. Pleural cholesterol > 45 mg/dl

Correct answers: A, B, C

9.* Pachypleuritis most often occurs as a result of:

- A. Primary spontaneous pneumothorax
- B. Inflammatory pleural fluid presence, usually after purulent pleurisy or TB
- C. Acute viral pleurodynia only
- D. COPD emphysema
- E. Pure transudative effusion from heart failure

Correct answer: B

10. Extended (complete) pachypleuritis can produce:

- A. Thoracic deformity by unilateral retraction
- B. Pulling of the mediastinum to the affected side
- C. Rise of the hemidiaphragm
- D. Retractions of intercostal spaces
- E. Hypertransparency without broncho-vascular pattern

Correct answer: A, B, C, D

11.* In pneumothorax, percussion typically reveals:

- A. Woody dullness
- B. Dullness with shifting level
- C. Hypersonority with tympanism
- D. Normal resonance
- E. Basal crepitations only

Correct answer: C

12. Physical exam findings in pneumothorax include:

- A. Unilaterally diminished respiratory expansion
- B. Pectoral fremitus absent
- C. Subcutaneous emphysema
- D. Amphorae tubular murmur
- E. Egophony at the upper limit of dullness

Correct answer: A, B, C, D

13.* The **medical emergency** form of pneumothorax described is:

- A. Closed pneumothorax
- B. Open pneumothorax
- C. Tension pneumothorax
- D. Small pneumothorax (<50%)
- E. Hydropneumothorax

Correct answer: C

14. In "valve/suffocating" pneumothorax, consequences include:

- A. Collapse of lung into the hilum
- B. Mediastinal shift to the opposite lung
- C. Acute respiratory failure
- D. Acute circulatory failure
- E. Pleural pressure remains negative

Correct answers: A, B, C, D

15.* In "open" pneumothorax, pleural pressure is:

- A. More negative than normal
- B. Equal to atmospheric pressure
- C. Positive and rising progressively
- D. Always fluctuating but negative
- E. Unchanged from normal

Correct answer: B

16. Causes/risk contexts for pneumothorax in the lecture include:

- A. Rupture of apical emphysema blisters (primary)
- B. Secondary pneumothorax frequent in COPD
- C. Penetrating or non-penetrating thoracic trauma
- D. Iatrogenic thoracocentesis
- E. Always due to tuberculosis

Correct answers: A, B, C, D

17.* A synchronous auscultatory click with heartbeats in left lateral decubitus (in pneumomediastinum) is:

- A. Damoiseau sign
- B. Hamman sign
- C. Jaccoud sign
- D. Garland sign
- E. Grocco sign

Correct answer: B

18. Acute mediastinitis is most often secondary to:

- A. Partial/total esophageal rupture (Boerhaave syndrome)
- B. Post digestive endoscopy
- C. Post sternotomy
- D. Descending infections from cervical/oropharyngeal area
- E. Pneumococcal bacteremia in CAP as the most common cause

Correct answers: A, B, C, D

19.* "Cape" edema/cyanosis with dilated superficial veins suggests:

- A. Bronchial asthma
- B. Upper vena cava compression syndrome
- C. COPD type A
- D. Pleural transudate
- E. Mycoplasma pneumonia

Correct answer: B

20. Compression manifestations of mediastinal masses include:

- A. Irritating barking cough
- B. Inspiratory bradypnea
- C. Dysphonia with bitonal voice
- D. Claude-Bernard-Horner syndrome
- E. Dysphagia

Correct Answers: A, B, C, D, E

21.* A "retractile pulmonary condensation by collapse of unventilated alveoli," occurring through complete bronchial obstruction is:

- A. Lung abscess
- B. Atelectasis
- C. Interstitial pneumonia
- D. Pleural effusion
- E. Pneumothorax

Correct answer: B

22. Secondary atelectasis may occur due to:

- A. Bronchopulmonary cancer
- B. Mucus plugs
- C. Aspirated foreign bodies
- D. Mediastinal tumors (extrinsic compression)
- E. Pneumothorax (extrinsic compression)

Correct answers: A, B, C, D, E

23.* In atelectasis, auscultation classically reveals:

- A. Pleural rub
- B. Respiratory silence
- C. Diffuse wheezing
- D. Amphoric breathing
- E. Egophony

Correct answer: B

24. Radiologic features of atelectasis described include:

- A. Homogeneous, well-defined opacity
- B. Supracostal intensity
- C. Retractile character with "sucking" of neighboring structures on inspiration
- D. Air bronchogram as defining feature
- E. Cavitation with air-fluid level

Correct answer: A, B, C

25.* "Necrosis and cavitation of the lung after a microbial infection in a susceptible person" defines:

- A. Bronchiectasis
- B. Lung abscess
- C. Lobar pneumonia
- D. Dry pleuritis
- E. COPD

Correct answer: B

26. Primitive (primary) lung abscess is linked to:

- A. Aspiration of anaerobic bacteria from gingival area
- B. Microaerophilic streptococci (mentioned)
- C. Predilection for posterior segments of upper lobes and upper segments of lower lobes
- D. Right lung affected more than left
- E. Always caused by Pneumococcus alone

Correct answers: A, B, C, D

27.* In an open lung abscess stage, the chest X-ray typically shows:

- A. Hypertransparency without vascular pattern
- B. Hydroaerial image (air-fluid level)
- C. Stellate fibrosis only
- D. Triangular opacity with base to hilum
- E. Interlobar cleft "phantom tumor"

Correct answer: B

28. In the bronchus-open abscess stage (without antibiotic treatment), features include:

- A. Occurs after ~7-10 days from onset
- B. Bouts of violent coughing followed by vomica
- C. Fever becomes variable inversely to amount of expectorated sputum
- D. Putrid smell suggests anaerobes
- E. Always absent sputum

Correct answers: A, B, C, D

29.* In sputum microscopy for pneumonia, >25 PMN/field suggests:

- A. Viral etiology
- B. Bacterial infection
- C. Fungal pneumonia only
- D. Tuberculosis
- E. Pleural effusion

Correct answer: B

30. Gram-stained smear patterns in pneumonia sputum include:

- A. Gram- diplococci → pneumococcus
- B. Gram+ in oodles → staphylococci
- C. Gram+ in chains → streptococci
- D. Gram- canes → Klebsiella
- E. Gram- coccobacilli → Haemophilus influenzae / Legionella

Correct answers: B, C, D, E

31.* "Triangular opacity with pleural base and tip to pulmonary hilum" is highlighted for diagnosis of:

- A. Atelectasis
- B. Pneumococcal pneumonia
- C. Pneumothorax
- D. COPD type B
- E. Mediastinal syndrome

Correct answer: B

32. Pneumococcal pneumonia positive diagnosis elements listed include:

- A. Signs and symptoms
- B. Triangular opacity consistent with consolidation syndrome
- C. Negative blood cultures (about 30%)
- D. Urinary pneumococcal antigen
- E. Sputoculture with Gram stain and antibiogram

Correct answers: A, B, D, E

33.* In staphylococcal pneumonia imaging, "small, poorly contoured cavities" are:

- A. Bronchiectasis
- B. Pneumatoceles
- C. Air bronchograms
- D. Phantom tumors
- E. Scodism

Correct answer: B

34. Mycoplasma pneumonia diagnostics include:

- A. PCR from oropharyngeal/nasopharyngeal/sputum (or CSF)
- B. IgM serology (appears ~2 weeks, may persist up to 1 year)
- C. Gram stain as key test
- D. IgG serology
- E. CSF testing in selected cases

Correct answers: A, B, D, E

35.* COPD diagnosis is confirmed when post-bronchodilator:

- A. FEV1/FVC ≥ 0.7
- B. FEV1/FVC < 0.7
- C. FEV1 $\geq 80\%$ predicted
- D. CAT < 10
- E. mMRC 0–1

Correct answer: B

36. GOLD grades for airflow obstruction (COPD) include:

- A. GOLD 1: FEV1 $\geq 80\%$ predicted
- B. GOLD 2: 50% $<$ FEV1 $<$ 80% predicted
- C. GOLD 3: 30% $<$ FEV1 $<$ 50% predicted
- D. GOLD 4: FEV1 $<$ 30% predicted
- E. GOLD 4: FEV1 $<$ 50% predicted

Correct answer: A, B, C, D

37.* A COPD "Type B / Blue bloater" is more associated with:

- A. Thin anxious patient with normal skin color
- B. Rare exacerbations
- C. Cyanosis and frequent exacerbations
- D. Normal FEV1/FVC ratio
- E. Normal blood gases

Correct answer: C

38. COPD Type B laboratory/ABG features described include:

- A. Hypoxemia ($\text{PaO}_2 < 60$ mmHg)
- B. Hypercapnia ($\text{PaCO}_2 > 55$ mmHg)
- C. Respiratory acidosis ($\text{pH} < 7.35$)
- D. Increased bicarbonate reserve (> 27 mEq/L)
- E. Hematocrit usually $< 48\%$ as typical

Correct answers: A, B, C, D

39.* mMRC grade 4 corresponds to:

- A. Breathless only with strenuous exercise
- B. Breathless when hurrying on the level
- C. Stops after ~100 meters
- D. Too breathless to leave the house or breathless when dressing
- E. Walks slower than peers due to breathlessness

Correct answer: D

40. Combined COPD assessment integrates:

- A. Spirometrically confirmed diagnosis
- B. Post-bronchodilator FEV1/FVC <0.7
- C. Airflow obstruction grade (FEV1 % predicted)
- D. Symptom assessment (mMRC/CAT) and exacerbation history
- E. Classification into A, B, and E groups

Correct answers: A, B, C, D, E