



**FACULTATEA DE FARMACIE**  
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## **Departamentul II**

### **Disciplina Tehnologie farmaceutică**

#### **TEMATICA DE CONCURS PENTRU OCUPAREA POSTULUI VACANT DE CONFERENȚIAR UNIVERSITAR, POZIȚIA 2, DISCIPLINA TEHNOLOGIE FARMACEUTICĂ, DIN STATUL DE FUNCȚIUNI AL DEPARTAMENTULUI II**

1. Drugs as dosage forms and delivery systems.
2. Stages of new drug development.
3. Stability and storage of drugs.
4. Quality assurance of drugs.
5. Oral medicated solutions. Formulation, preparation, quality requirements.
6. Medicated solution intended for ear, nasal and oropharyngeal mucosa. Formulation, preparation and quality requirements.
7. Injections. Assurance of isotonicity, isohydria, sterility. Manufacturing of injections.
8. Large volume parenterals. Classification. Quality requirements.
9. Ophthalmic preparations. Formulation, preparation and quality control of ophthalmic preparations.
10. Preparations obtained by extraction. Factors influencing the extraction process of plant drugs. Methods of extraction.
11. Pharmaceutical aerosols. Formulation and manufacture.
12. Preparations for inhalation. Formulation and manufacture.
13. Pharmaceutical emulsions. Emulsions formation and stabilization. Role of emulsifiers. Types of emulsifiers and their selection. Emulsion formulation and preparation.
14. Pharmaceutical suspensions. Formulation of suspensions. Factors influencing the stability of suspensions. Deflocculated and flocculated suspensions.
15. Cutaneous semisolid preparations (ointments). Formulation and quality requirements.
16. Therapeutic transdermal systems. Formulation and manufacture.
17. Rectal preparations. Active substances and excipients used in formulation. Methods of preparation. Quality control.

18. Vaginal preparations. Active substances and excipients used in formulation. Methods of preparation. Quality control.
19. Powders for oral administration and for topical application.
20. Hard gelatin capsules. Formulation of the shell. Preparation and manufacturing of empty capsules. Formulation of the fill. Filling of hard capsules shells.
21. Soft gelatin capsules. Formulation of the shell and the fill of soft gelatin capsules. Manufacturing methods for soft gelatin capsules.
22. Formulation of compressed tablets. Types of excipients and their role in formulation.
23. Manufacturing methods of compressed tablets.
24. Quality control of compressed tablets.
25. Sugar coated tablets. The steps of the sugarcoating tablets.
26. Film-coated tablets. Film former materials – characteristics, examples.
27. Delayed release and extended-release tablets. Modified release technologies.

## **BIBLIOGRAFIE**

1. Iuliana Popovici, Dumitru Lupuleasa. Tehnologie Farmaceutică vol. I. Ediția a IV- a, Ed. Polirom, Iași, 2017.
2. Iuliana Popovici, Dumitru Lupuleasa. Tehnologie Farmaceutică vol. II. Ediția a II- a, Ed. Polirom, Iași, 2017.
3. Iuliana Popovici, Dumitru Lupuleasa. Tehnologie Farmaceutică vol. III. Ediția a II- a, Ed. Polirom, Iași, 2017.
4. Loyd V. Allen, Jr. Nicholas G. Popovich, Howard C. Ansel: Ansel's Pharmaceutical Dosage Forms and Drug Delivery Systems. Tenth Edition, Ed. Lippincott Williams & Wilkins, 2014.
5. \*\*\* Farmacopeea Română, ediția a X-a, Ed. Medicală, București, 2000.
6. \*\*\* Farmacopeea Română, ediția a X-a, Supliment 2000, Ed. Medicală, București, 2001.
7. \*\*\* Farmacopeea Română, ediția a X-a, Supliment 2001, Ed. Medicală, București, 2002.
8. \*\*\* Farmacopeea Română, ediția a X-a, Supliment 2004, Ed. Medicală, București, 2004.

Șef de disciplină,

Prof. univ. dr. Lavinia Vlaia