Pharmaceutical Technology State Exam Topic List 2020

1. Dissolution tests of active substances, testing apparatuses, parameters of tests, kinetic models of dissolution
2. Relevance of nanotechnology in pharmaceutical technology and nanotechnological preparations
3. Relevance and technology of rapidly disintegrating and fast dissolving preparations
4. Relevance and technology of slow/sustained release preparations
5. Relevance and technology of delayed release preparations
6. Incompatibilities in pharmaceutical technology
7. Theory of dissolution, equations and possibilities of increasing the solubility and dissolution rate
8. Operation of distillation, evaporation, ion-echange and reverse osmosis and their importance
9. Pharmaceutical relevance, theory and practice of crystallization
10. Aseptic preparation, sterilization, their importance in the pharmaceutical technology
11. Operation of drying, its theory and practice
12. Lyophilisation, spray drying, their importance in the pharmaceutical technology
13. Operation of fluidization, its theory and practice
14. Theory and practice of sieving and grinding/milling
15. Pharmaceutical excipients of solid dosage forms, their application and importance
16. Pharmaceutical excipients of semi-solid dosage forms, their application and importance
17. Theory and practice of pharmaceutical solutions as dosage forms, practical aspects of their preparation, examinations
18. Theory and practice of pharmaceutical emulsions as dosage forms, practical aspects of their preparation, examinations
19. Theory and practice of pharmaceutical suspensions as dosage forms, practical aspects of their preparation, examinations
20. Preparation of semi-solid dermal, locally acting drug delivery systems, their biopharmaceutical and technological aspects, examinations
21. Preparation and examination of rectal and vaginal drug delivery systems and their biopharmaceutical and technological aspects
22. Design of otological and nasal preparations and their biopharmaceutical and technological aspects
23. Design of ophthalmic drug delivery systems and their biopharmaceutical and technological aspects
24. Technological and biopharmaceutical aspects of injections
25. Technological and biopharmaceutical aspects of infusions
26. Biopharmaceutical and technological aspects of inhalational drug delivery systems
27. Design of transdermal drug delivery systems and their biopharmaceutical and technological aspects
28. Preparation and examinations of granules and pellets
29. Theory and practice of tableting, tablet examinations
30. Technological aspects of encapsulation, pharmaceutical capsules
31. Preparation of extracts, their technological importance
32. Coating operations, types of coating, its importance
33. Stability of pharmaceutical preparations, stability tests and expiration date determination
34. Industrial manufacture of medicines, quality control, GMP, industrial plant requirements, personnel and equipments

Pécs, 15 May 2020