Questions for the State exam in Pharmaceutical Technology

1. Principles of dosage form – types and definitions. The main types of excipients used in dosage forms. Quality control.
2. Rheology and the flow of liquids and semisolids. Gels.
3. Solutions - properties, solubility and dissolution rate, Solutions as dosage forms, vehicles, excipients used by preparation of solutions. Solubilization.
4. Theory of extraction, methods and galenical preparations.
5. Parenterals - route of administration, types of parenteralls, bio¬logical availability, manufacture of parenterals, Sterility testing.
7. Ophthalmic dosage forms – liquid, semisolid, solid.
10. Emulsifying agents - their function in emulsions, HLB system.
11. Emulsion theory, the stability of emulsions, preparation of emulsions, and identifica¬tion of emulsion type and emulsifying agents.
18. Coated tablets. Tablet coating, theory and main reasons, types of coating process, and quality control.
20. Powders and granules as dosage forms
22. Modified-release peroral dosage forms - prolonged, sustained release and controlled release of drugs from peroral dosage forms.
23. Controlled drug delivery systems-peroral, transdermal, ocular.
24. Targeting of drugs to their site of ac¬tion. Liposomes and nanoparticles as colloidal drug delivery systems.
25. Biopharmaceutic and pharmacokinetic principles dosage forms – main pharmacokinetics parameters and their consequences on the developing of dosage forms.
27. Pharmaceutical packs and packaging – functions, type of packs, primary and secondary packs, pack¬ing materials.
28. Storage of pharmaceutical products and quality control of dosage forms.