

Annexure-A
-GOVERNMENT OF TRIPURA
HEALTH AND FAMILY WELFARE DEPARTMENT
ANNEXURE-A
SYLLABUS OF COMPETATIVE EXAMINATION FOR THE POST OF PHARMACIST
(ALLOPATHY)

1. PHARMACEUTICS-I:

20marks

Metrology-System of weights and measures. Calculations including conversion from one to another system. Percentage calculations and adjustment of products .Use of alligation method in calculations.Isotonic solutions.

Sterilization-Concept of sterilization and its differences from disinfection-Thermal resistance of microorganisms. Detailed study of the following sterilization process. Sterilization with moist heat, Dry heat sterilization, Sterilization by radiation, Sterilization by filtration and Gaseous sterilization.

Aseptic techniques-Applications of sterilization process in hospitals particularly with reference to surgical dressings and intravenous fluids. Precautions for safe and effective handling of sterilization equipment.

Processing of Tablets-Definition; different type of compressed tables and their properties. Processes involved in the production of tablets; Tablets excipients ; Defects in tablets; Evaluation of Tablets; Physical standards including Disintegration and Dissolution. Tablet coating-sugar coating; films coating, enteric coating and micro-encapsulation (Tablet coating may be de.. in an elementary manner).

Processing of Capsules-Hard and soft gelatin capsules; different sizes of capsules; filling of capsules; handling and storage of capsules. Special applications of capsules.

Prescriptions-Reading and understanding of prescriptions; Latin terms commonly used (Detailed study is not necessary), Modern methods of prescribing, adoption of metric system. Calculations involved in dispensing.

Incompatibilities in prescriptions- study of various types of incompatibilities-physical, chemical and therapeutic.

Posology- Dose and dosage of drugs, factors influencing dose, calculations of doses on the basis of age, sex, surface area and veterinary doses.

Suspensions (elementary study)-Suspensions containing diffusible solids and liquids and their preparations. Study of the adjuvant used like thickening agents, wetting agents, their necessity and quantity to be incorporated ,suspensions of precipitate forming liquids like tinctures, their preparations and stability. suspensions produced by chemical reaction. An introduction to flocculated /non-flocculated suspension system.

Emulsions-Types of emulsions, identification of emulsion system, formulation of emulsions, selection of emulsifying agent. Instabilities in emulsions, preservation of emulsions.

Parenteral dosage forms-Definition, General requirements for parenteral dosage forms. Types of parenteral formulations, vehicles, adjuvant, processing and personnel, Facilities and quality control. Preparation of Intravenous fluids and admixtures- Total parenteral nutrition, Dialysis fluids.

2. PHARMACEUTICAL CHEMISTRY-I

15 marks

Acids, bases and buffers-Boric acid, Hydrochloric acid, Strong Ammonium hydroxide, Sodium hydroxide and official buffers.

Gastrointestinal agents-

Acidifying agents- Dilute Hydrochloric acid.

Antacids- Sodium bicarbonate, Aluminum hydroxide gel, Aluminum phosphate, Calcium carbonate, Magnesium carbonate, Magnesium trisilicate, Magnesium oxide, Combinations of antacid preparations.

Protective and Adsorbents- Bismuth sub carbonate and Kaolin.

Saline cathartics- Sodium potassium tartrate and Magnesium sulphate.

Antimicrobials and Astringents- Hydrogen peroxide, Potassium permanganate, Chlorinated lime, Iodine, Solutions of Iodine, Povidone-iodine, Boric acid, Borax, Silver nitrate, Mild silver protein, Mercury yellow, Mercuric oxide, Ammoniated mercury.



Sulphur and its compounds- Sublimed sulphur, Precipitated sulphur, Selenium sulphide.
Astringents- Alum and Zinc Sulphate.

Major Intra and Extra cellular electrolytes-

Electrolytes used for replacement therapy- Sodium chloride and its preparations, Potassium chloride and its preparations.

Physiological acid-base balance and electrolytes used- Sodium acetate, Potassium Acetate, Sodium bicarbonate Inj., Sodium citrate, Potassium citrate, Sodium lactate injection, Ammonium chloride and its injection.

Combination of oral electrolyte powders and solutions.

Structure, uses, and storage of the following organic compounds.

Antibiotics- Benzyl penicillin, Phenoxymethyl penicillin, Benzathine penicillin, Ampicillin, Cloxacillin, Carbencillin, Gentamicin, Neomycin, Erythromycin, Tetracycline, Cephalexin, Cephaloridine, Cephalothin, Griseofulvin, Chloramphenicol.

Antifungal agents- Udecylenic acid, Tolnaftate, Nystatin, Amphotericin, Hamycin.

Antimalarial Drugs- Chloroquine, Amodiaquine, Primaquine, Proguanil, Pyrimethamine, Quinine, Trimethoprim.

General Anaesthetics- Halothane, Cyclopropane, Diethyl ether, Methohexital sodium, Thiopental sodium, Trichloroethylene.

Antidepressant Drugs- Amitriptyline, Nortriptyline, Imipramine, Pheipazine, Tranylcypromine.

Analeptics- Theophylline, Caffeine, Coramine, Dextro-amphetamine.

Adrenergic drugs- Adrenaline, Noradrenaline, Isoprenaline, Phenylephrine, Salbutamol, Terbutaline,

Cardiovascular Drugs- Ethylnitrite, Glyceryl trinitrate, Alpha methyl dopa, Guanethidine, Clofibrate, Quinidine.

Anti-Neoplastic Drugs- Actinomycin, Azathioprine, Busulphan, Chlorambucil, Cisplatin, Cyclophosphamide, Daunorubicin Hydrochloride, Fluorouracil, Mercaptopurine, Methotrexate, Mytomycin.

3. PHARMACOGNOSY

5 marks

Adulteration and drug evaluation; significance of pharmacopoeial standards.

Pharmaceutical aids- Honey, Arachis oil, starch, kaolin, pectin, olive oil. Lanolin, Beeswax, Acacia, Tragacanth, sodium Alginate, Agar, Guar gum, Gelatin.

Miscellaneous- Liquorice, Garlic, picrorhiza, Dirscorea, Linseed, shatavari, shankpushpi, pyrethrum, Tobacco.

4. BIOCHEMISTRY AND CLINICAL PATHOLOGY

5 marks

Carbohydrates: Brief chemistry and role of carbohydrates, classification, qualitative tests, Diseases related to carbohydrate metabolism.

Lipids: Brief chemistry and role of lipids, classification and qualitative tests. Diseases related to lipids metabolism.

Vitamins: Brief chemistry and role of vitamins and coenzymes. Role of minerals and water in life processes.

Enzymes: Brief concept of enzymatic action. factors affecting it.

Therapeutics: Introduction to pathology of blood and urine. Lymphocytes and platelets, their role in health and disease. Erythrocytes-Abnormal cells and their significance. Abnormal constituents of urine and their significance in diseases.

5. HUMAN ANATOMY AND PHYSIOLOGY

10 marks

Skeletal System: Structure and function of Skelton .Classification of joints and their function. Joint disorders.

Cardiovascular System: Composition of blood, functions of blood elements. Blood group and coagulation of blood. Brief information regarding disorders of blood. Name and functions of lymph glands. Structure and functions of various parts of the heart .Arterial and venous system with special reference to the names and positions of main arteries and veins. Blood pressure and its recording. Brief information about cardiovascular disorders.