All India Institute of Medical Sciences, Jodhpur

Indicative Syllabus for the Examination for the Post of Pharmacist Grade-II

(Syllabus is only indicative. The questions can assess any aspect of knowledge, aptitude, attitude and practical skills, which is expected from a trained person to work efficiently at the advertised post)

100% Questions to be based on Subject/Domain knowledge from the following topics:-

Introduction of different dosage forms. Their classification with examples-their relative applications. Familiarization with new drug delivery systems. Introduction to Pharmacopoeias with special reference to the Indian Pharmacopoeia.

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

Packaging of pharmaceuticals-Desirable features of a container and types of containers. Study of glass &plastics as materials for containers and rubber as a material for closure-their merits and demerits. Introduction to aerosol packaging. Size reduction, objectives, and factors affecting size reduction, methods of size reduction- study of Hammer mill, ball mill, Fluid energy mill and Disintegrator.

Size separation-size separation by sifting. Official standards for powders. Sedimentation methods of size separation. Construction and working of Cyclone separator.

Mixing and Homogenization-Liquid mixing and powder mixing, Mixing of semisolids. Study of silverson Mixer Homogenizer, planetary Mixer; Agitated powder mixer; Triple Roller Mill; Propeller Mixer, colloid Mill and Hand Homogeniser. Double cone mixer.
Clarification and Filtration-Theory of filtration, Filter media; Filter aids and selection of filters. Study of the following filtration equipments-Filter Press, sintered filters, Filter candles, Meta filter.

Extraction and Galenicals-
Study of percolation and maceration and their modification, continuous hot extraction- Application in the preparation of tinctures and extracts.
Introduction to Ayurvedic dosage forms.
Heat process-Evaporation-Definition-Factors affecting evaporation-study of evaporating still and Evaporating pan.

Distillation-Simple distillation and Fractional distillation, steam distillation and vacuum distillation. Study of vacuum still, preparation of purified water I.P. and water for Injection I.P. construction and working of the still used for the same.

Introduction to drying process-Study of Tray Dryers; Fluidized Bed Dryer, Vacuum Dryer and Freeze Dryer.

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 done in an elementary manner).

RECRUITMENT CELL - EXAM AIIMS JODHPUR

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

Study of immunological products like sera, vaccines, toxoids & their preparations.

PHARMACOGNOSY

1. Definition, history and scope of Pharmacognosy including indigenous system of medicine.
2. Various systems of classification of drugs and natural origin.
3. Adulteration and drug evaluation; significance of pharmacopoeial standards.
4. Brief outline of occurrence, distribution, outline of isolation, identification tests, therapeutic effects and pharmaceutical application of alkaloids, terpenoids, glycosides, volatile oils, tannins and resins.
5. Occurrence, distribution, organoleptic evaluation, chemical constituents including tests wherever applicable and therapeutic efficacy of following categories of drugs.
   (a) **Laxatives**- Aloes, Rhubarb, Castor oil, Ispaghula, Senna.
   (b) **Cardiotonics**- Digitalis, Arjuna.
   (c) **Carminatives & G.I. regulators**- Umbelliferous fruits, Coriander, Fennel, Ajowan, Cardamom, Ginger, Black pepper, Asafoetida, Nutmeg, Cinnamon, Clove.
   (d) **Astringents**- Catecheu.
   (e) **Drugs acting on nervous system**- Hyoscyamus, Belladonna, Aconite, Ashwagandha, Ephedra, Opium, Cannabis, Nux -vominca.
   (f) **Antihypertensive**- Rauwolfia.
   (g) **Antitussives**- Vasaka, Tolu balsam, Tulsi.
   (h) **Antirheumatics**- Guggal, Colchicum.
   (i) **Antitumour**- Vinca.
   (j) **Antileprotics**- Chaulmoogra oil.
   (k) **Antidiabetics**- Pterocarpus, Gymnema sylvestro.
   (l) **Diuretics**- Gokhru, Punarnava.
   (m) **Antidysenterics**- Ipecacuanha.
   (n) **Antiseptics and disinfectants**- Benzoin, Myrrh, Neem, Curcuma.
   (o) **Antimalarials**- Cinchona.
   (p) **Oxytocics**- Ergot.
   (q) **Vitamins**- Shark liver oil and Amla.
   (r) **Enzymes**- Papaya, Diastase, Yeast.
   (s) **Perfumes and flavoring agents**- peppermint oil, Lemon oil, Orange oil, lemon grass oil, sandalwood.

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

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

Collection and preparation of crude drugs for the market as exemplified by Ergot, opium, Rauwalfia, Digitalis, senna.

Study of source, preparation and identification of fibers used in sutures and surgical dressings cotton, silk, wool and regenerated fibers.

Gross anatomical studies of-senna, Datura, cinnamon, cinchona, fennal, clove, Ginger, Nuxvomica & ipecacuanha.

BIOCHEMISTRY AND CLINICAL PATHOLOGY

Introduction to biochemistry. Brief chemistry and role of proteins, polypeptides and amino acids, classification, Qualitative tests, Biological value, Deficiency diseases.

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.

HUMAN ANATOMY AND PHYSIOLOGY

Scope of Anatomy and physiology. Definition of various terms used in Anatomy. Structure of cell, function of its components with special reference to mitochondria and microsomes.

Elementary tissues: Elementary tissues of the body, i.e. epithelial tissue, muscular tissue, connective tissue and nervous tissue.

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.

Respiratory system: Various parts of respiratory system and their functions, physiology of respiration.

Urinary System: Various parts of urinary system and their functions, structure and functions of kidney. Physiology of urine formation. Patho-physiology of renal diseases and edema.

Muscular System: Structure of skeletal muscle, physiology of muscle contraction. Names, positions, attachments and functions of various skeletal muscles. Physiology of neuromuscular junction.

Central Nervous System: Various parts of central nervous system, brain and its parts, functions and reflex action. Anatomy and physiology of automatic nervous system.

Sensory Organs: Elementary knowledge of structure and functions of the organs of taste, smell, ear, eye and skin. Physiology of pain.

Digestive System: names of various parts of digestive system and their functions. Structure and functions of liver, physiology of digestion and absorption.

Endocrine System: Endocrine glands and Hormones. Location of glands, their hormones and functions. Pituitary, thyroid, Adrenal and pancreas.

Reproductive system: Physiology and Anatomy of Reproductive system.

HEALTH EDUCATION AND COMMUNITY PHARMACY

Concept of health: Definition of physical health, mental health, social health, spiritual health determinants of health, indicatory of health, concept of disease, natural history of diseases, the disease agents, concept of prevention of diseases.

Nutrition and health: Classification of foods, requirements, diseases induced due to deficiency of proteins, vitamins and minerals-treatment and prevention.

Demography and family planning: Demography cycle, fertility, family planning, contraceptive methods, behavioral methods, natural family planning methods, chemical methods, mechanical methods, hormonal contraceptives, population problem of India.

First aid: Emergency treatment in shock, snake-bite, burns, poisoning, heart disease, fractures and resuscitation methods, Elements of minor surgery and dressings.

Environment and health: Source of water supply, water pollution, purification of water, health and air, noise, light-solid waste disposal and control-medical entomology, arthropod borne diseases and their control. Rodents, animals and diseases.

Fundamental principles of microbiology: Classification of microbes, isolation, staining techniques of organisms of common diseases.

Communicable diseases: Causative agents, mode of transmission and prevention. Respiratory infections- chicken pox, measles, influenza, diphtheria, whooping cough and tuberculosis.

Intestinal infection-poliomyelitis, Hepatitis, cholera, Typhoid, food poisoning, Hookworm infection.

Arthropod borne infections-plague, Malaria, filariases.

Surface infection-Rabies, Tranchoma, Tetanus, Leprosy.

Sexually transmitted diseases-Syphilis, Gonorrhoea, AIDS.

Non-communicable diseases: causative agents, prevention, care and control.

Epidemiology: Its scope, methods, uses, dynamics of disease transmission. Immunity and immunization: Immunological products and their dose schedule. Principles of disease control and prevention, hospital acquired infection, prevention

and control. Disinfection, types of disinfection procedures, for-faces, urine, sputum, room linen, dead-bodies, instruments.

PHARMACEUTICS (Dispensing Pharmacy)

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 indispensing.

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.

Dispensed Medications: (Note: A detailed study of the following dispensed medication is necessary. Methods of preparation with theoretical and practical aspects, use of appropriate containers and closures. Special labeling requirements and storage conditions should be highlighted).

Powders-Type of powders-Advantages and disadvantages of powders, Granules, cachets and tablet triturates. Preparation of different types of powders encountered in prescriptions. Weighing methods, possible errors in weighing, minimum weighable amounts and weighing of a material below the minimum weighable amount, geometric dilution and proper usage and care of dispensing balance.

Liquid oral Dosage forms:

Monophasic-Theoretical aspects including commonly used vehicles, essential adjuvant like stabilizers, colorants and flavors, with examples.

Review of the following monophasic liquids with details of formulation and practical methods.

Liquids for internal administration Liquids for external administration or used on mucous membranes

Mixtures and concentrates, Gargles, Syrups, Mouth washes, Throat-paints, Elixirs, Douches, Ear Drops, Nasal Drops, Sprays, Liniments & Lotions.

Biphasic Liquid Dosage Forms:

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.

Semi-Solid Dosage Forms:

Ointments: Types of ointments, classification and selection of dermatological vehicles.

Preparation and stability of ointments by the following processes:

Titration
Chemical reaction
fusion
Emulsification.

Pastes: Differences between ointments and pastes, Bases of pastes. Preparation of pastes and their preservation.

Jellies: An introduction to the different types of jellies and their preparation. An elementary study of poultice.

Suppositories and peassaries-Their relative merits and demerits, types of suppositories, suppository bases, classification, properties, preparation and packing of suppositories. Use of suppositories of drug absorption.

Dental and cosmetic preparations: Introduction to Dentifrices, facial cosmetics, Deodorants. Anti- per spirants, shampoo, Hair dressings and Hair removers.

Sterile Dosage forms:

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.

Sterility testing: particulate matter monitoring- Faculty seal packaging.

Ophthalmic products: study of essential characteristics of different ophthalmic preparations. Formulation: additives, special precautions in handling and storage of ophthalmic products.

PHARMACEUTICAL CHEMISTRY

1. Introduction to the nomenclature of organic chemical systems with particular reference to hetero-cyclic system containing up to 3 rings.

2. The chemistry of following pharmaceutical organic compounds covering their nomenclature, chemical structure, uses and the important physical and chemical properties(chemical structure of only those compounds marked with asterisk (*). The stability and storage conditions and the different type of pharmaceutical formulations of these drugs and their popular brand names.

Antiseptics and Disinfectants-Proflavine*, Benzalkonium chloride, Cetrimide, Phenol, chloroxylenol, Formaldehyde solution, Hexachlophene, Nitrofurantoin.

Sulphonamides-Sulphadiazine, Sulphaguanidine, Phthalylsulphathaizole, Succinylsulphathiazole, Sulphadimethoxine, Sulphamethoxypyridazine, Co-trimoxazole, sulfacetamide*

Antileprotic Drugs- Clofazimine, Thiambutosine, Dapsone*, solapsone,

Anti-tubercular Drugs- Isoniazid*, PAS*, Streptomycin, Rifampicin, Ethambutol*, Thiacetazone, Ethionamide, cycloserine, pyrazinamide*.

Antimoebic and Anthelmintic Drugs- Emetine, Metronidazole, Halogenated hydroxyquinolines, Diloxanide furoate, Paromomycin , Piperazine*, Mebendazole ,D.E.C.*

Antibiotics- Benzyl penicillin*, Phenoxy methyl penicillin*, Benzathine penicillin, Ampicillin*, Cloxacillin, Carbencicillin, 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.

Tranquilizers-Chlorpromazine*,Prochlorperazine,Trifluoperazine, Thiothixene,Haloperiodol*, Triperiodol, Oxypertine, Chlordizepoxide, Diazepam*, Lorazepam, Meprobamate.

Hypnotics-Phenobarbitone*,Butobarbitone, Cylobarbitone, Nitrazepam, Glutethimide*, Methyprylon, Paraldehyde, Triclofosodium.

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

Antidepressant Drugs- Amitriptyline, Nortryptyline, Imperamine*, Phepelzine, Tranylcypromine.

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

Adrenergic drugs- Adrenaline*, Noradrenaline, Isoprenaline*, Phenylephrine, Salbutamol, Terbutaline, Ephedrne*, Pseudoephedrine.

Adrenergic antagonist- Tolazoline, Propranolol*, Practolol.

Cholinergic Drugs- Neostigmine*, Pyridostigmine, Pralidoxime, Pilocarpine, Physostigmine*.

Cholinergic Antagonists- Atropine*, Hyoscine, Homatropine, Propantheline*, Benztropine, Tropicamide, Biperiden*.

Diuretic Drugs- Furosemide*, Chlorothiazide, Hydrochlorothiazidc*, Benzthiazide, Urea*, Mannitol*, Ethacrynic Acid.

Cardiovascular Drugs- Ethylnitrite*, Glyceryl trinitrate, Alpha methyldopa, Guanethidine, Clofibrate, Quinidine.

Hypoglycemie Agents- Insulin, Chlorpropamide*, Tolbutamide, Glibenclamide, Phenformin*, Metformin.

Coagulants and Anti coagulants- Heparin, Thrombin, Menadione*, Bisphydroxycoumarin, Warfarin sodium.

Local Anaesthetics- Lignocaine*, Procaine*, Benzocaine.

Histamine and anti-Histaminic Agents- Histamine, Diphenhydramine*, Promethazine, Cyproheptadine, Mepyramine*, Pheniramine, Chlorpheniramine*.

Analgesics and Anti-pyretics-Morphine, Pethidine, Codeine, Mathadone, Aspirin*, Paracetamol, Analgin, Dextropropoxphene, Pentazocine.

Non-steriodal anti-inflammatory agents- Indomethacin*, Phenylbutazone*, Oxyphenbutazone, Ibuprofen.

Thyroxine and Antithyroids- Thyroxine*, Methimazole, Methyl thiouracil, Propylthiouracil.

Diagnostic Agents- Lopanoic Acid, Propyliodone, Sulfobromopthalein-sodium, Indigotindisulfonate, Indigo Carmine, Evans blue, Congo Red, Fluorescein sodium.

Anticonvulsants, cardiac glycosides, Antiarrhythmic, Antihypertensives & Vitamins.

Steroidal Drugs- Betamethasone, Cortisone, Hydrocortisone, Prednisolone, Progesterone, Testosterone, Oestradiol, Nandrolone.

Anti-Neoplastic Drugs- Actinomycin, Azathioprie, Busulphan, Chloramubucil, Cisplatin, Cyclophosphamide, Daunorubicin Hydrochoride, Fluorouracil, Mercaptopurine, Methotrexate, Mytomycin.

PHARMACOLOGY & TOXICOLOGY

Introduction to Pharmacology, Scope of Pharmacology.

Routes of administration of drugs, their advantages and disadvantages. Various processes of absorption of drugs and the factors affecting them. Metabolism, distribution and excretion of drugs.

General mechanism of drugs action and their factors which modify drugs action. Pharmacological classification of drugs.

The discussion of drugs should emphasize the following aspects:

Drugs acting on the central Nervous system:

General anaesthetics- adjunction to anaesthesia, intravenous anaesthetics. Analgesic antipyretics and non-steroidal.

Anti-inflammatory drugs- Narcotic analgesics. Antirheumatic and anti-gout remedies.

Sedatives and Hypnotics, psychopharmacological agents, anticonvulsants, analeptics. Centrally acting muscle relaxants and anti-parkinsonism agents. Local anesthetics.

Drugs acting on autonomic nervous system.

Cholinergic drugs, Anticholinergic drugs, anticholinesterase drugs.Adrenergic drugs and adrenergic receptor blockers. Neurone blockers and ganglion blockers. Neuromuscular blockers, used in myasthenia gravis.

Drugs acting on eye: Mydriatics, drugs used in glaucoma.

Drugs acting on respiratory system, Respiratory stimulants, Bronchodilators, Nasal decongestants, Expectorants and Antitussive agents.

Autocoids: physiological role of histamine and serotonin, Histamine and Antihistamines, prostaglandins.

Cardio vascular drugs

Cardiotonics, Antiarrhythmic agents, Anti-anginal agents, Antihypertensive agents, peripheral Vasodilators and drugs used in atherosclerosis.

Drugs acting on the blood and blood forming organs. Haematinics, coagulants and anticoagulants, Haemostatic, Blood substitutes and plasma expanders.

Drugs affecting renal function- Diuretics and anti-diuretics.

Hormones and hormone antagonists- Hypoglycemic agents, Anti--thyroid drugs, sex hormones and oral contraceptives, corticosteroids.

Drugs acting on digestive system-carminatives, digest ants, Bitters, Antacids and drugs used in peptic ulcer, purgatives and laxatives, Anti-diarrohoeals, Emetics, Anti-emetics, Antispasmodics.

Chemotherapy of microbial diseases:

Urinary antiseptics, sulphonamides, penicillin, streptomycin, Tetracyclines and other antibiotics. Anti- tubercular agents, Antifungal agents, antiviral drugs, anti-leprotic drugs. Chemotherapy of protozoal diseases, Anthelmintic drugs. Chemotherapy of cancer.

PHARMACEUTICAL JURISPRUDENCE

Origin and nature of pharmaceutical legislation in India, its scope and objectives. Evolution of the "Concept of pharmacy" as an integral part of the Health care system.

Principles and significance of professional Ethics. Critical study of the code of pharmaceutical Ethics drafted by pharmacy council of India.

Pharmacy Act, 1948-The General study of the pharmacy Act with special reference to Education Regulations, Working of state and central councils, constitution of these councils and functions, Registration procedures under the Act.

The Drugs and Cosmetics Act, 1940-General study of the Drugs and cosmetics Act and the Rules there under. Definitions and salient features related to retail and whole sale distribution of drugs. The powers of Inspectors, the sampling procedures and the procedure and formalities in obtaining licenses under the rule. Facilities to be provided for running a pharmacy effectively. General study of the schedules with special reference to schedules C,C1,F,G,J,H,P and X and salient features of labeling and storage conditions of drugs.

The Drugs and Magic Remedies (objectionable Advertisement) Act, 1954-General study of the Act, objectives, special reference to be laid on Advertisements, magic remedies and objections1 and permitted advertisements -diseases which cannot be claimed to be cured.

Narcotic Drugs and psychotropic substances Act, 1985-A brief study of the act with special reference to its objectives, offences and punishment.

Brief introduction to the study of the following acts:
Latest Drugs (price control) order in force (as amended to date)

Medicinal and Toilet preparations (excise Duties) Act, 1955 (as amended to date**).Medical Termination of Pregnancy Act, 1971.**

DRUG STORE AND BUSINESS MANAGEMENT

Introduction-Trade, Industry and commerce, Functions and subdivision of commerce, Introduction to Elements for Economics and Management. Forms of Business Organizations. Channels of Distribution.

Drug House Management-selection of site, space Lay-out and legal requirements. Importance and objectives of purchasing, selection of suppliers, credit information, tenders, contracts and price determination and legal requirements thereto. Codification, handling of drug stores and other hospital supplies. Inventory Control-objects and importance, modern techniques like ABC,VED analysis, the lead time, inventory carrying cost, safety stock, minimum and maximum stock levels, economic order quantity, scrap and surplus disposal.

Sales promotion, Market Research, Salesmanship, qualities of a salesman, Advertising and Window Display.

Recruitment, training, evaluation and compensation of the pharmacist.

Banking and Finance-Service and functions of bank, Finance planning and sources of finance.

HOSPITAL AND CLINICAL PHARMACY

Hospital-Definition, Function, classifications based on various criteria, organization, Management and health delivery system in India.

Hospital Pharmacy: Definition Functions and objectives of Hospital pharmaceutical services. Location, Layout, Flow chart of materials and men. Personnel and facilities requirements including equipments based on individual and basic needs. Requirements and abilities required for Hospital pharmacists.

Drug Distribution system in Hospitals. Out-patient service, In-patient services- types of services detailed discussion of unit Dose system, Floor ward stock system,satellite pharmacy services, central sterile services, Bed side pharmacy.

Manufacturing: Economical considerations, estimation of demand.

Sterile manufacture-Large and small volume parenterals, facilities, requirements, layout production planning, man-power requirements.

Non-sterile manufacture-Liquid orals, externals, Bulk concentrates. Procurement of stores and testing of raw materials. Nomenclature and uses of surgical instruments and Hospital Equipments and health accessories.

Hospital Formulary system and their organization, functioning, composition.

Drug Information service and Drug Information Bulletin.

Surgical dressing like cotton, gauze, bandages and adhesive tapes including their pharmacopoeial tests for quality. Other hospital supply eg. I.V.sets, B.G. sets, Ryals tubes, Catheters, Syringes etc.

Application of computers in maintenance of records, inventory control, medication monitoring, drug information and data storage and retrieval in hospital retail pharmacy establishment.

Clinical Pharmacy:

Introduction to Clinical pharmacy practice- Definition, scope.

Modern dispensing aspects- Pharmacists and patient counseling and advice for the use of common drugs, medication history.

Common daily terminology used in the practice of Medicine.

Disease, manifestation and patho-physiology including salient symptoms to understand the disease like Tuberculosis, Hepatitis, Rheumatoid Arthritis, Cardio-vascular diseases, Epilepsy, Diabetes, Peptic Ulcer, Hypertension.

RECRUITMENT CELL EXAM AIIMS JODHPUR

Physiological parameters with their significance.

Drug Interactions: Definition and introduction. Mechanism of Drug Interaction. Drug-drug interaction with reference to analgesics, diuretics, cardiovascular drugs, Gastro-intestinal agents. Vitamins and Hypoglycemic agents. Drug-food interaction.

Adverse Drug Reaction: Definition and significance. Drug-Induced diseases and Teratogenicity.

Drugs in Clinical Toxicity- Introduction, general treatment of poisoning, systemic antidotes, Treatment of insecticide poisoning, heavy metal poison, Narcotic drugs, Barbiturate, Organophosphorus poisons.

Drug dependences, drug abuse, addictive drugs and their treatment, complications.

Bio-availability of drugs, including factors affecting it.