

CHAPTER 5

ONLINE COMMON ENTRANCE TEST (OCET) FOR B.PHARMACY (LATERAL ENTRY) -2025 SYLLABUS AND PROCEDURE

There will be an Online Common Entrance Test (OCET) for all the Diploma Pharmacy pass out students who are willing to seek admission to **B.Pharmacy (Lateral Entry) Course** for the session 2025-26 in all Govt. /Private & Deemed to be University departments and all Govt./ Self-Financing B.Pharmacy Institutions approved by the Pharmacy Council India (PCI) situated in the State of Haryana. The Test would have 90 objective types Multiple Choice of Questions (MCQs). Each question will carry one mark. Separate rank-wise merit list for the above test will be prepared. The admission will be made on the basis of inter-se rank obtained in the said Entrance Test and as per the choice of Branch /Institution filled by the candidate at the time of locking of Choices (counseling).

5.1 SYLLABUS

5.1.1 Framework for Online Common Entrance Test (OCET) for B.Pharmacy (Lateral Entry) - 2025:

- Maximum Marks : 90
- There will be one Question Paper of 90 minutes duration covering the following subjects:-
 - i. Pharmaceutics
 - ii. Pharmaceutical chemistry
 - iii. Pharmacognosy
 - iv. Human anatomy and physiology
 - v. Social pharmacy
 - vi. Pharmacology
 - vii. Community pharmacy and management
 - viii. Pharmacotherapeutics
 - ix. Biochemistry & clinical pathology
 - x. Hospital and clinical pharmacy
 - xi. Pharmacy law and ethics

5.1.2 Syllabus for Online Common Entrance Test (OCET) for B.Pharmacy (Lateral Entry) - 2025:-

The syllabus for B.Pharmacy (Lateral Entry) Entrance Examination -2025 is in alignment with the Diploma Curriculum prescribed by Pharmacy Council of India (PCI). However, the same is not restricted solely to the prescribed curriculum and may require exhaustive study of important topics.

PHARMACEUTICS

- Salient features of Indian Pharmacopoeia
- Packaging materials
- Pharmaceutical aids
- **Unit Operations:** Size reduction, Size separation, Mixing, Drying, Filtration, Extraction.
- **Dosage Forms:** Tablets, Capsules, Liquid oral preparations, Topical preparations, Powders and granules, Sterile formulations and Immunological products
- Quality control and quality assurance
- Novel drug delivery systems

PHARMACEUTICAL CHEMISTRY

- Sources and types of errors
- Impurities in Pharmaceuticals and Limit Tests
- **Inorganic Pharmaceuticals:** Pharmaceutical formulations, market preparations, storage conditions and uses of Haematinics, Gastro-intestinal Agents, Topical agents, Dental products and Medicinal gases.
- **Drugs Acting on Central Nervous System:** Anesthetics, Sedatives and Hypnotics, Antipsychotics, Anticonvulsants and Anti-Depressants.
- **Drugs Acting on Autonomic Nervous System:** Adrenergic Agonists, Adrenergic Antagonists, Cholinergic Drugs and Related Agents, Anti-Cholinergic Agents.
- **Drugs Acting on Cardiovascular System:** Anti-Arrhythmic Drugs, Anti-Hypertensive Agents and Antianginal Agents.
- Diuretics
- Hypoglycemic Agents
- Analgesic And Anti-Inflammatory Agents
- **Anti-Infective Agents:** Antifungal Agents, Urinary Tract Anti-Infective Agents, Anti-Tubercular Agents, Antiviral Agents, Antimalarials, Sulfonamides, Antibiotics, Tetracyclines, Macrolides, etc.
- Anti-Neoplastic Agents

PHARMACOGNOSY

- Definition, history, present status and scope of Pharmacognosy
- Classification of drugs
- Quality control of crude drugs
- Brief outline of occurrence, distribution, isolation, identification tests, therapeutic activity and pharmaceutical applications of alkaloids, terpenoids, glycosides, volatile oils, tannins and resins.
- **Biological source, chemical constituents and therapeutic efficacy of the following categories of crude drugs:**

Laxatives	Aloe, Castor oil, Ispaghula, Senna
Cardiotonic	Digitalis, Arjuna
Carminatives and G.I. regulators	Coriander, Fennel, Cardamom, Ginger, Clove, Black Pepper, Asafoetida, Nutmeg, Cinnamon
Astringents	Myrobalan, Black Catechu, Pale Catechu
Drugs acting on nervous system	Hyoscyamus, Belladonna, Ephedra, Opium, Tea leaves, Coffee seeds, Coca
Anti-hypertensive	Rauwolfia
Anti-tussive	Vasaka, Tolu Balsam
Anti-rheumatics	Colchicum seed
Anti-tumour	Vinca, Podophyllum
Antidiabetics	Pterocarpus, Gymnema
Diuretics	Gokhru, Punarnava
Anti-dysenteric	Ipecacuanha
Antiseptics and disinfectants	Benzoin, Myrrh, Neem, Turmeric
Antimalarials	Cinchona, Artemisia
Oxytocic	Ergot

- Plant fibres used as surgical dressings
- Basic principles involved in the traditional systems of medicine
- Method of preparation of Ayurvedic formulations
- Herbs as health food
- Herbal cosmetics

HUMAN ANATOMY AND PHYSIOLOGY

- Scope of Anatomy and Physiology
- Definition of various terminologies
- Structure of Cell
- Tissues of the human body
- Osseous system
- Haemopoietic system
- Lymphatic system
- Cardiovascular system
- Respiratory system
- Digestive system
- Skeletal muscles
- Nervous system
- Sense organs
- Urinary system
- Endocrine system
- Reproductive system

SOCIAL PHARMACY

- **Introduction to Social Pharmacy**
 - Role of Pharmacists in Public Health.
 - Concept of Health -WHO Definition, various dimensions, determinants, and health indicators.
 - National Health Policy
 - National Health Mission
 - Sustainable Development Goals
- **Preventive healthcare**
 - Demography and Family Planning
 - Mother and child health
 - Vaccines, types of immunity and immunization
 - Effect of Environment on Health
 - Psychosocial Pharmacy

➤ **Nutrition and Health**

- Basics of nutrition – Macronutrients and Micronutrients
- Importance of water and fibres in diet
- Balanced diet, Malnutrition, nutrition deficiency diseases, ill effects of junk foods, calorific and nutritive values of various foods, fortification of food
- Food safety, adulteration of foods, effects of artificial ripening, use of pesticides, genetically modified foods
- Dietary supplements, nutraceuticals, food supplements indications, benefits, Drug-Food Interactions

➤ **Epidemiology:** Introduction and related terminology

- Causative agents, epidemiology and clinical presentations and Role of Pharmacists in educating the public in prevention of the following communicable diseases:
 - Respiratory infections,
 - Intestinal infections
 - Arthropod-borne infections
 - Surface infections
 - STDs, HIV/AIDS.

➤ National Health programs

➤ Pharmacoeconomics

PHARMACOLOGY

- General Pharmacology
- Drugs Acting on the Peripheral Nervous System
- Drugs Acting on the Eye
- Drugs Acting on the Central Nervous System
- Drugs Acting on the Cardiovascular System
- Drugs Acting on Blood and Blood Forming Organs
- Drugs acting on Respiratory System
- Drugs Acting on the Gastro Intestinal Tract

- Drugs Acting on the Kidney
- Hormones and Hormone Antagonists
- Autocoids
- **Chemotherapeutic Agents:** Penicillins, Cephalosporins, Aminoglycosides, Fluoroquinolones, Macrolides, Tetracyclines, Sulphonamides, Anti-tubercular drugs, Anti-fungal drugs, Anti-viral drugs, Anti-amoebic agents, Anthelmintics, Anti-malarial agents and Anti-neoplastic agents.
- Biologicals

COMMUNITY PHARMACY AND MANAGEMENT

- Community Pharmacy Practice
- Professional responsibilities of community pharmacists
- Good Pharmacy Practice and SOPs.
- Prescription and prescription handling
- Communication skills
- Patient counselling
- Medication Adherence
- Health Screening Services in Community Pharmacy
- Over The Counter (OTC) Medications
- Community Pharmacy Management

BIOCHEMISTRY & CLINICAL PATHOLOGY

- Introduction to biochemistry
- **Carbohydrates:** Definition, classification with examples, chemical properties, Qualitative tests and biological role of carbohydrates.
- **Proteins:** Definition, classification of proteins (based on composition and solubility, Chemical nature), Structure of Proteins, Qualitative tests and biological role of proteins and amino acids and Diseases related to malnutrition of proteins.
- **Lipids:** Definition, classification, Structure and properties of triglycerides, Fatty acid classification, functions of cholesterol, Lipoproteins and Qualitative tests and functions of lipids.
- Nucleic acids

- Enzymes
- Vitamins
- **Metabolism:**
 - Metabolism of Carbohydrates
 - Diseases related to abnormal metabolism of Carbohydrates
 - Metabolism of lipids
 - Diseases related to abnormal metabolism of lipids
 - Metabolism of Amino acids
 - Diseases related to abnormal metabolism of amino acid
 - Biological oxidation
- Minerals
- Water and Electrolytes
- Introduction to Biotechnology
- Organ function tests
- Introduction to Pathology of Blood and Urine

PHARMACOTHERAPEUTICS

- **Pharmacotherapeutics:** Introduction, scope, and objectives.
- **Definition, etiopathogenesis, clinical manifestations, non-pharmacological and pharmacological management of the diseases associated with:** Cardiovascular System, Respiratory System, Endocrine System, Central Nervous System, Gastro Intestinal Disorders, Haematological disorders, Infectious diseases, Musculoskeletal disorders, Dermatology, Psychiatric Disorders, Ophthalmology, Anti-microbial Resistance, Women's Health

HOSPITAL AND CLINICAL PHARMACY

- **Hospital Pharmacy:** Definition, scope, national and international scenario, Organizational structure, Professional responsibilities, Good Pharmacy Practice (GPP) in hospital, Hospital Pharmacy Standards, NAQS guidelines and NABH Accreditation.
- Different Committees in the Hospital
- Supply Chain and Inventory Control

- Drug distribution
- Compounding in Hospitals
- Radio Pharmaceuticals
- Application of computers in Hospital Pharmacy Practice
- **Clinical Pharmacy:** Definition, scope, and development - in India and other countries
- Daily activities of clinical pharmacists
- Pharmaceutical care
- Medication Therapy Management
- Home Medication Review
- Clinical laboratory tests used in the evaluation of disease states - significance and interpretation of test results
- Poisoning: Drugs and Poison Information Centre and their services
- Pharmacovigilance
- Medication errors
- Drug Interactions

PHARMACY LAW AND ETHICS

- General Principles of Law, History and various Acts related to Drugs and Pharmacy profession.
- Pharmacy Act-1948 and Rules
- Pharmacy Practice Regulations 2015
- **Drugs and Cosmetics Act 1940 and Rules 1945 and New Amendments:**
 - Manufacture of drugs
 - Sale of Drugs
 - Administration of the Act and Rules
- Narcotic Drugs and Psychotropic Substances Act 1985 and Rules
- Drugs and Magic Remedies (Objectionable Advertisements) Act 1954.
- Prevention of Cruelty to Animals Act-1960
- Poisons Act-1919:
- FSSAI (Food Safety and Standards Authority of India) Act and Rules:
- National Pharmaceutical Pricing Authority
- Code of Pharmaceutical Ethics
- Medical Termination of Pregnancy Act and Rules

- Role of Pharma regulatory bodies
- Good Regulatory practices
- Introduction to BCS system of classification, Clinical Trials, ANDA, NDA, New Drug development, New Drugs and Clinical Trials Rules, 2019. Brand v/s Generic, Trade name concept, Introduction to Patent Law and Intellectual Property Rights, Emergency Use Authorization
- Blood bank
- Clinical Establishment Act and Rules
- Biomedical Waste Management Rules 2016,
- Bioethics
- Introduction to the Consumer Protection Act
- Introduction to the Disaster Management Act
- Medical Devices