

Health Department
Drug Control Administration Bihar

Syllabus for Technician (Bench Chemist)

Format of Examination-

1. All questions will be multiple choice questions (MCQ) type.
2. Each multiple-choice questions (MCQ) will carry four (04) marks for each correct answer.
3. There will be negative marking for incorrect answer, one (01) mark will be deducted for each incorrect answer.
4. Total duration- 02 hours.

Sr. No.	Subject	Total Marks	Total Questions	Time Duration	Exam Type
1	General Studies & Mental Ability	40	10	2 Hours	Objective Type
2	Pharmacy/Pharmaceutical Sciences	360	90		
	Total	400	100		

PAPER-I: GENERAL STUDIES AND MENTAL ABILITY

1. Geography of India-Physical, Social, Natural Resources and population related topics with special reference to Bihar.
2. Cultural heritage of India- Literature, Art, Religion, and Architecture with special reference to Bihar.
3. History of India with special reference to Bihar.
4. Socio-economic and political history of modern India.
5. Economic development in India with reference to Bihar since independence.
6. Indian Economy and Planning.
7. Indian Polity and constitution of India
8. General Mental Ability
9. General science, Environment and Information and communication Technology.
10. Daily events of Regional, national and International Importance including Sports.
11. Simplification - Percentage, Highest common factor (HCF), Lowest common factor (LCM).
12. Ratio and proportion.
13. Simple interest, compound interest, area, volume, time and work.
14. Logical reasoning, visual reasoning, alpha numeric reasoning, number series.

Paper-II: Pharmacy/Pharmaceutical Sciences

Forensic Pharmacy

- Drugs and Cosmetic Act, 1940
- Pharmacy Act, 1948
- Drugs and Magic Remedy Act, 1954
- Medical and Toilet Preparation Act, 1955
- Prevention of Cruelty to Animal Act
- Drug Price Control Order, 1995
- Medical Termination of Pregnancy Act, 1971
- Poison Act, 1919 and Dangerous Drugs Act, 1930
- Trademark Registration Act
- Pharmaceutical Ethics
- Pharmacopoeias: Introduction to IP, BP, USP, NFI, and Extra pharmacopoeia. Brief Study on GMP, GLP, USFDA Guidelines, ICH Guidelines, WHO Guidelines.

Manufacturing Pharmacy

- Tablet and Tablet Coating
- Capsule
- Blood Fluid and Electrolytes
- Parenteral Preparation and Quality Control
- Emulsion, Suspension
- Ointment and Cream
- Ophthalmic Solutions
- Surgical Dressing
- Biological Preparation (Vaccine, Sera, and Anti -- Sera)
- Biopharmaceutics

Pharmaceutical Chemistry

- Limit Test
- Bio-Assay
- Sterility Test
- Pyrogen Test
- Theory & Application of Colorimeter, Fluorimeter, Nephelometer, and Turbidimeter
- Karl Fischer Titration
- Alcohol Determination
- Microbiological Assay of Vitamins, Antibiotics, and Vaccine Preparation

Medicinal Chemistry

Definition, classification, Structure, preparation, brand name and storage of the following classes of drugs:

- Steroids
- Antihistaminic Agents
- Sedatives and Hypnotics
- Psycho-therapeutic Agents
- Analgesics
- Cardiovascular Agents

Pharmacognosy

Source, Chemical Constituents, uses, and adulteration of the following classes of natural drugs:

- Rauwolfia
- Ipecacuanha
- Belladonna
- Cinchona
- Aloe
- Noxvomica
- Cinnamon
- Digitalis
- Opium
- Kurchi
- Brahmi
- Tulsi
- Bael and Ephedra

Pharmacology & Toxicology

- Introduction and General Principle, Mode of Action
- Drug Receptor Interaction
- Drug Antagonist
- Metabolism, Excretion, and Distribution of Drugs
- Routes of Administration
- Bioavailability
- Drug Dependence and Addiction
- Adverse Drug Reaction, Drug Abuse, Drug Toxicity
- Drug Allergy
- Biostatistics

Hospital and Clinical Pharmacy

- Handling of Prescription
- Incompatibility
- Storage Conditions of Drugs
- Clinical Pharmacy

Anatomy, Physiology & Health Education

Basic knowledge the following is required:

- Circulatory System
- Digestive System
- Sense organs
- Reproductive System
- Urinary System
- Respiratory System
- Nervous System

Health Education

- Nutrition
- First Aid
- Population Control
- Aids Control