

III/VI PHARM-D (REGULAR) DEGREE EXAMINATIONS, APRIL – 2026

**PHARM – D
THIRD YEAR
PHARMACOLOGY – II**

Time: 3 Hours

Maximum: 70 Marks

5 x 14 = 70 M

Answer ANY FIVE of the following questions.

Each Question carries fourteen marks.

01. Classify antiplatelet agents and discuss in detail the pharmacology of Aspirin and Clopidogrel.
02. Classify Potassium-sparing diuretics and discuss their mechanism of action, uses and adverse effects.
03. Classify quinolones and fluoroquinolones. Describe their mechanism of action, pharmacokinetics, therapeutic uses and adverse effects.
04. Classify antifungal drugs. Discuss the mechanism of action, therapeutic uses and adverse effects of important antifungal antibiotics.
05. Define immunopharmacology. Explain the classification, mechanism of action, therapeutic uses and adverse effects of immunosuppressant drugs.
06. Explain the principles of animal toxicology and describe the objectives and significance of acute, sub-acute and chronic toxicity studies.
07. Describe the mechanism of protein synthesis. Explain initiation of translation in eukaryotes, translational control, and post-translational modifications.

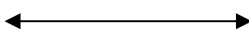
III/VI PHARM-D (REGULAR) DEGREE EXAMINATIONS, APRIL – 2026**PHARM – D****THIRD YEAR****PHARMACEUTICAL ANALYSIS**

Time: 3 Hours

Maximum: 70 Marks

5 x 14 = 70 M**Answer ANY FIVE of the following questions.****Each Question carries fourteen marks.**

01. (a) Describe the factors affecting column efficiency, frontal and elution analysis and applications of column chromatography.
(b) Briefly outline the principle, instrumentation and pharmaceutical applications of HPTLC.
02. (a) Write a note on different types of currents in Polarography and add an account on Ilkovic's equation and Polarographic wave.
(b) Give an account on electrodes used in Potentiometry and briefly outline Karl Fischer titration.
03. (a) Write a note on effect of solvent on absorption spectra and discuss applications of UV Spectroscopy.
(b) Explain various sources and detectors used in IR Spectroscopy.
04. Describe the principle and applications of
(a) NMR Spectroscopy.
(b) Mass Spectroscopy
05. Write a note on
(a) Diffraction patterns and applications of X-Ray Diffraction.
(b) Optical rotator dispersion and circular dichroism in Polarimetry.
06. (a) Briefly outline the instrumentation and applications of DTA.
(b) Give a brief outline on importance of Statistical Quality Control and Regulatory Control in pharmaceutical quality assurance.
07. Write a note on
(a) Derivatisation techniques and applications of Gas Chromatography.
(b) Principle and applications of paper electrophoresis.



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PHARM – D

THIRD YEAR

PHARMACO THERAPEUTICS – II

Time: 3 Hours

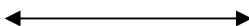
Maximum: 70 Marks

5 x 14 = 70 M

Answer ANY FIVE of the following questions.

Each Question carries fourteen marks.

01. Discuss the aetiology, clinical features, diagnosis and pharmacological management of Tuberculosis. Explain DOTS regimen and drug resistance.
02. Write a note on the classification, causative organisms and treatment strategies of Urinary Tract Infections (UTIs).
03. Explain the non-pharmacological and pharmacological management of Osteoarthritis.
04. Discuss Chronic Renal Failure and explain pharmacological considerations in CRF patients.
05. Describe the chemotherapy of Breast Cancer, including drug regimens and adverse effects.
06. Explain the management of chemotherapy-induced nausea and vomiting (CINV).
07. Discuss on the aetiology, clinical features and pharmacotherapy of Psoriasis.



III/VI PHARM-D (REGULAR) DEGREE EXAMINATIONS, APRIL – 2026**PHARM – D****THIRD YEAR****PHARMACEUTICAL JURISPRUDENCE**

Time: 3 Hours

Maximum: 70 Marks

5 x 14 = 70 M**Answer ANY FIVE of the following questions.****Each Question carries fourteen marks.**

01. (a) Give the conditions for grant of license and explain the procedure for obtaining the license for the manufacture of drugs under Schedule C, C1 and X.
(b) Mention the qualifications and duties of the Drugs Inspector. Write about sampling procedure to be followed by drugs inspector.
02. (a) Write the salient features of Indian Patents and Design Act 1970 with reference to Drugs and Cosmetics?
(b) Write about Drug Price Control Order 2013.
03. (a) Explain the construction and working of a bonded laboratory.
(b) Mention the objectives of Drugs and Magic Remedies Act? Write about prohibited advertisements with suitable examples under this act.
04. Bring out the salient features of the Narcotic Drugs and Psychotropic Substances Act. Explain the procedure for cultivation and production of opium.
05. (a) Match the following

1. Schedule H	a) Diseases or ailments which a drug may not purport to prevent or cure
2. Schedule X	b) Life period of drugs
3. Schedule J	c) List of prescription drugs
4. Schedule P	d) List of drugs whose import, manufacture and sale, labeling and packing are governed by special provisions

- (b) Define adulterated and spurious drugs
 - (c) Mention the labeling requirements of Schedule X and H drugs with suitable examples.
06. (a) Give the constitution and write about functioning of Pharmacy Council of India.
- (b) Write about Joint State Pharmacy Council and mention their advantages.
07. Write about the following:
- (a) Pharmacist ethics with respect to trade and profession.
 - (b) Prevention of cruelty to animals.

III/VI PHARM-D (REGULAR) DEGREE EXAMINATIONS, APRIL – 2026**PHARM – D
THIRD YEAR
MEDICINAL CHEMISTRY**

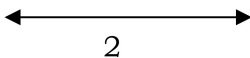
Time: 3 Hours

Maximum: 70 Marks

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01. Write a note on
 - (a) combinatorial chemistry
 - (b) Electronic parameters in QSAR studies.
02. (a) Classify Antiviral agents with structures. Write the synthesis, mechanism of action and uses of any one Reverse Transcriptase Inhibitor.
 - (b) Write the IUPAC name, structure and uses of
 - (i) Metronidazole (ii) isoniazide (iii) Ketoconazole
03. (a) Write the classification, mechanism of action and SAR of sulphonamides.
 - (b) Give the structure, synthesis, Mechanism of action and clinical uses of chloroquine.
04. (a) Define and classify antineoplastic agents with examples. Enumerate the synthesis and mechanism of action of any one antimetabolite used in cancer therapy.
 - (b) Sketch out the structures of various diagnostic agents used to test Liver and kidney function.
05. (a) Give the structures of various synthetic estrogens and discuss the synthesis of progesterone from diosgenin.
 - (b) Discuss the SAR of Thiazide diuretics and outline the synthesis of chlorthiazide.

06. (a) Classify antihypertensives with examples. Discuss mode of action and SAR of Angiotensin converting Enzyme Inhibitors (ACEI).
(b) Write the structure and clinical uses of
(i) Nitroglycerine (ii) Clofibrate (iii) Warfarin (iv) Procainamide
07. What are Urinary-tract Anti-infective agents? Classify them with examples. Explain the chemistry, SAR and mechanism of action of Quinolone anti-bacterial agents and SAR of Tetracyclines.



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PHARM – D

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PHARMACEUTICAL FORMULATIONS

Time: 3 Hours

Maximum: 70 Marks

5 x 14 = 70 M

Answer ANY FIVE of the following questions.

Each Question carries fourteen marks.

01. (a) Define dosage form? Classify dosage form with suitable examples.
(b) Explain quality control tests for tablets.
02. (a) Explain the steps involved in sugar coating technique with the compositions of coating liquids at each step.
(b) Write a note on granulation techniques used for tablet manufacturing process.
03. (a) Describe the composition and steps involved in preparation of hard gelatin shell.
(b) Explain the formulation and manufacturing of soft gelatin capsules.
04. Explain classification, formulation and evaluation of suspensions with examples.
05. Given an account on quality control tests for parenteral dosage forms as per IP.
06. Explain formulation, methods of preparation and packaging of suppositories.
07. (a) Explain formulation approaches and factors affecting ocular drug delivery systems.
(b) Write a note on Nasal drug delivery system and explain about the mechanism of absorption enhancers.