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III/IV B.PHARMACY (REG) DEGREE EXAMINATIONS, MAR/APR - 2026

FIFTH SEMESTER

MEDICINAL CHEMISTRY II - THEORY

Time: 3 Hours Maximum :75Marks

SECTION - A

Answer any FIVE of the following Questions. 5 x 10 = 50 M

01. Write the chemical classification of H_1-antagonists with their structures and enumerate the synthesis of Diphenhydramine hydrochloride.

02. Classify Antianginal agents and explain the synthesis and mechanism of action of Notroglycerin.

03. Write the structures and medicinal uses of

a) Clofibrate b) Warfarin c) Lovastatin

d) Digitoxin e) Menadione

04. Give an account on Corticosteroids with their structures.

05. Write a note on Insulin and its preparations.

06. Classify Diuretics and add a note on SAR and mechanism of action of carbonic Anhydrase Inhibitors.

07. Enumerate the synthesis, mechanism of action and uses of

a) Mechlorethamine b) Mercaptopurine

SECTION - B

Answer any FIVE of the following Questions. 5 x 5 = 25 M

08. Write the structure, IUPAC name, synthesis and medicinal uses of cimetidine.

09. Give the classification of Antiarrhythnic drugs and outline the synthesis of Disopyramide phosphate.

10. Sketch out the chemical structures of captopril, Reserpine, Methyldopate hydrochloride, Minoxidil and Hydralazine.

11. Write the structures and medical uses of any two natural and synthetic (or) semisynthetic Oestrogens.

12. Write the structure, mechanism of action and medicinal uses of L - Thyroxine and L-Thyronine.

13. Write the synthesis, mechanism of action and medicinal uses of Procaine.

14. Give any two structures and mechanism of action of sulphonyl ureas acting as Antidiabetic agents.

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III/IV B.PHARMACY (REG) DEGREE EXAMINATIONS, MAR/APR - 2026

FIFTH SEMESTER

INDUSTRIAL PHARMACY I - THEORY

Time: 3 Hours Maximum :75Marks

SECTION - A

Answer any FIVE of the following Questions 5 x 10 = 50 M

01. What are the objectives of preformulation studies? Explain in detail importance of pKa, pH and polymerization during formulation development. [10M]

02. Discuss in detail about Granulation methods of preparation of tablets. [10M]

03. a) What are the methods used to prepare Suspensions. [5M]

b) Discuss about various steps of preparation of empty hard gelatin capsules. [5M]

04. a) What are essential requirements of formulation ingredients used in parenterals? [4M]

b) Describe various quality control tests of parenterals? [6M]

05. a) What are the challenges in the use of ophthalmic preparations? How do you overcome those. [6m]

b) Enlight the sterilization methods used for containers. [4M]

06. Write the formulation, preparation and evaluation of following cosmetic preparations.

a) Hair dyes [5M] b) Tooth pastes [5M]

07. a) Write the materials used for packaging of pharmaceutical products. [7M]

b) Discuss the factors used for selection of packaging materials. [3M]

SECTION - B

Answer any FIVE of the following Questions 5 x 5 = 25 M

08. Discuss the significance of Hydrolysis, Oxidation of drugs in formulation development?

09. Explain various methods of tablet coating.

10. Write about formulation and manufacturing considerations of Emulsions

11. Write the process of filling of soft gelatin capsules with a neat sketch.

12. What are the vehicles used for preparation of injections with its merits, demerits and criteria for their selection

13. How do you prepare Cold cream? Give its formula and principle in formation of cream.

14. Give a note on Propellants used in Aerosols.

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III/IV B.PHARMACY (REG) DEGREE EXAMINATIONS, MAR/APR-2026

FIFTH SEMESTER

PHARMACOLOGY II - THEORY

Time: 3 Hours Maximum :75Marks

SECTION - A

Answer any FIVE of the following Questions. 5 x 10 = 50 M

01. Discuss the pharmacology of cardiac glycosides in treatment of congestive heart failure.

02. Classify anti-arrhythmic agents. Discuss mechanism of action, pharmacology and adverse effects of any two classes of anti-arrhythmic agents.

03. Describe the mechanism of action, adverse effects and drug interactions of loop diuretics.

04. Explain in details synthesis, storage, release and action of histamine as an autocoid. Write briefly about types of histamine receptors and their nature.

05. Classify NSAIDs and describe their mechanism of action and adverse effects of COX-2 inhibitors in detail.

06. Enumerate the synthesis, structure and pharmacology of Insulin.

07. Discuss the pharmacological actions of oestrogens. Add a note on hormone replacement therapy.

SECTION - B

Answer any FIVE of the following Questions. 5 x 5 = 25 M

08. Write about the mechanism of action and therapeutic uses of organic nitrates.

09. Explain pharmacology of HMG-CO A reductase inhibitors.

10. Describe the types and mechanism of action of heparin.

11. Write short notes on types and functions of autocoids

12. Explain the mechanism of action of allopurinol and febuxostat

13. Write short notes on anti-thyroid drugs

14. Write about any one method for bioassay of d-tubocurarine

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III/IV B.PHARMACY (REG) DEGREE EXAMINATIONS, MAR/APR -2026

FIFTH SEMESTER

PHARMACOGNOSY & PHYTOCHEMISTRY II - THEORY

Time: 3 Hours Maximum :75Marks

SECTION - A

Answer any FIVE of the following Questions. 5 x 10 = 50 M

01. Define Biogenesis and depict the Shikimic acid pathway for the production of secondary metabolites.

02. Write the biological source, chemistry, therapeutic uses of Opium and Cinnamon.

03. Classify resins and write the biological source, chemical nature and uses of Asafoetida.

04. Explain the principle and procedure involved in the isolation of Quinine.

05. Discuss on the industrial production, estimation and uses of Taxol.

06. Describe the industrial production, estimation and uses of Digoxin.

07. Discuss on the importance of Chromatography in the isolation, purification and identification of phytoconstituents from crude drugs.

SECTION - B

Answer any FIVE of the following Questions. 5 x 5 = 25 M

08. What is the role of radioactive isotopes in the investigation of Biogenic studies.

09. Write the biological source, chemical constituents and therapeutic uses of Aloes.

10. Define Tannins and Volatile oils and write their commercial applications.

11. Write the principle and procedure present in the estimation of Sennosides.

12. Explain the principle involved in isolation of Atropine.

13. Write the uses and estimation procedure of Diosgenin.

14. Enlist various spectroscopy techniques used in phytochemistry research.

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III/IV B.PHARMACY (REG) DEGREE EXAMINATIONS, MAR/APR - 2026

FIFTH SEMESTER

PHARMACEUTICAL JURISPRUDENCE - THEORY

Time: 3 Hours Maximum :75Marks

SECTION - A

Answer any FIVE of the Questions. 5 x 10 = 50 M

01. Esplain in detail about the constitution and function of PCI.

02. Write a note on CPCSEA guidelines for Breeding and Stocking of Animals.

03. Write in detail about import and export of narcotic drugs und psychotropic substances.

04. Discuss indetail about manufacturing and licensing of inbond and outside bond lab.

05. Discuss briefly the rules belong to manufacture and sale of drugs as per D&C act.

06. Explain the procedure for license to export of alcoholic preparations. Add a note offences and penalties.

07. Discuss about the salient features of drugs and magic remedies act and its rules.

SECTION - B

Answer any FIVE of the following Questions 5 x 5 = 25 M

08. Discuss the rule relating to import of drugs as per drugs and cosmetics Act.

09. Give an account on qualification and duties of drug inspector and government analyst.

10. Write a brief note on medical termination of pregnancy act. 1971.

11. Write a note on Schedule M.

12. Discuss about the sales prices of bulk drugs fixed as per DPCO.

13. Write a brief review on Hathi and Mudaliar committee.

14. Discuss the legal requirement of cultivation and production of Opium.