

QP Code: 621006

Reg. No.....

**Sixth Semester B. Pharm Degree Supplementary Examinations
October 2023
Medicinal Chemistry III
(2017 Scheme)**

Time: 3 Hours

Max. Marks: 75

- *Answer all questions to the point neatly and legibly • Do not leave any blank pages between answers • Indicate the question number correctly for the answer in the margin space*
- *Answer all parts of a single question together • Leave sufficient space between answers*
- *Draw diagrams wherever necessary*

Essays

(2x10=20)

1. Explain the concept of combinatorial chemistry and write in detail about pharmacophore modelling.
2. What are antibacterial sulphonamides. Classify them with structural examples and explain the structural activity relationship (SAR) of antimalarial quinolines.

Short Notes

(7x5=35)

3. Explain the structural activity relationship (SAR) of sulphonamides.
4. Outline the chemical synthesis and mechanism of action of chloroquine.
5. Enlist the applications of prodrugs with examples
6. Classify antifungal drugs with structural examples.
7. Outline the chemical synthesis and mechanism of action of isoniazid.
8. Explain the structural activity relationship (SAR) of penicillins.
9. Explain the chemistry and mechanism of action of aminoglycosides.

Answer Briefly

(10x2=20)

10. What are urinary tract anti-infective agents.
11. Give the structures of penicillin degradation products.
12. Outline the chemical synthesis of mebendazole.
13. Outline the chemical synthesis of ciprofloxacin.
14. Give the structure and uses of any two macrolide antibiotics.
15. Explain the mechanism of action of acyclovir.
16. Beta-lactamase inhibitors.
17. Explain the concept of prodrugs.
18. What are monobactam antibiotics.
19. Explain about two QSAR parameters.

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**Sixth Semester B. Pharm Degree Supplementary Examinations
October 2023
Pharmacology III
(2017 Scheme)**

Time: 3 Hours

Max. Marks: 75

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- Draw diagrams wherever necessary

Essays

(2x10=20)

1. Describe the life cycle of malarial parasite with schematic representation and categorize the drugs used for the management of malarial infections
2. Classify various types of Gene therapy techniques and discuss the processes involved in ex vivo and in vivo gene transfer techniques

Short Notes

(7x5=35)

3. Describe the pharmacology of 5HT₃ receptor antagonist
4. Explain the mechanism of emesis and name the drugs used as emetics
5. Classify antacids and explain advantages of combination of antacids
6. Explain the pharmacology of Chloroquine
7. Explain the Pharmacology of Sulphonamides
8. Classify antimetabolites and explain the mechanism and ADR of folate antagonist
9. Classify antifungal agents and explain the pharmacology of ketoconazole.

Answer Briefly

(10x2=20)

10. Write the mechanism of action of Dapsone
11. Enumerate the first line drugs for tuberculosis and explain the mechanism of action of Isoniazid
12. Explain the mechanism of action of Zidovudine
13. Define expectorants and outline their mechanism of action
14. Enlist Adverse Drug Reaction and Uses of aminoglycosides
15. Explain the mechanism of action of bronchodilators
16. Name the four drugs which bind avidly to tubulin and cause arrest of cells in metaphase
17. List the drugs used as appetite stimulants and appetite suppressants
18. Define biosimilars. What are the advantages of biosimilars
19. Name the drugs used in the treatment of psoriasis

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Sixth Semester B. Pharm Degree Supplementary Examinations
October 2023
Herbal Drug Technology
(2017 Scheme)

Time: 3 Hours

Max. Marks: 75

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- Answer all parts of a single question together • Leave sufficient space between answers
- Draw diagrams wherever necessary

Essays

(2x10=20)

1. Explain on patenting of traditional knowledge and natural products with examples.
2. Define herb. Write a note on selection, identification, and authentication of herbal materials and how processing of herbal raw materials are done.

Short Notes

(7x5=35)

3. Explain the basic principle involved in Ayurveda.
4. Explain the method of preparation of Arista.
5. Explain in brief Garlic and Honey as health food.
6. Explain side effects and interactions of Ginseng.
7. Give a brief account of plant-based industries in India.
8. Explain organic farming.
9. Explain the bleaching agents used in skin care products.

Answer Briefly

(10x2=20)

10. Define herb and herbal medicine.
11. Define bioprospecting with examples.
12. Mention health benefits of Spirulina.
13. Define Churna and Lehya.
14. Give the source and uses of turmeric.
15. Mention the various components of schedule T.
16. Explain drug interactions of pepper.
17. What are phytosomes. Give its significance.
18. Define biopesticides with examples.
19. Mention the cosmetic uses of henna and aloe.

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**Sixth Semester B. Pharm Degree Supplementary Examinations
October 2023**

Biopharmaceutics and Pharmacokinetics

(2017 Scheme)

Time: 3 Hours

Max. Marks: 75

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- *Answer all parts of a single question together • Leave sufficient space between answers*
- *Draw diagrams wherever necessary*

Essays

(2x10=20)

1. Elaborate on the mechanism of drug absorption.
2. Explain the kinetics of two compartment open model IV bolus administration.

Short Notes

(7x5=35)

3. Explain Danckwert's model and interfacial barrier model.
4. Elaborate pH partition hypothesis and its limitations.
5. Explain the non-renal routes of drug excretion
6. Elaborate any two methods to determine AUC.
7. Explain protein binding of drug. Write a note on kinetics of protein-drug binding.
8. Elaborate on the compartment models and their types.
9. Describe enhancement of bioavailability through pharmaceutical approach.

Answer Briefly

(10x2=20)

10. Define biopharmaceutics and pharmacokinetics.
11. Draw a typical plasma concentration time profile.
12. What are the different levels of IVIVC.
13. What are the types of compendial dissolution apparatus and their application.
14. Classification of drugs according to BCS system of classification.
15. State Michaelis Menten equation.
16. State any two causes for non-linearity.
17. Describe the significance of volume of distribution.
18. Define clearance and therapeutic index.
19. Why are phase I reactions called functionalization reactions.

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Pharmaceutical Biotechnology

(2017 Scheme)

Time: 3 Hours

Max. Marks: 75

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- *Answer all parts of a single question together • Leave sufficient space between answers*
- *Draw diagrams wherever necessary*

Essays

(2x10=20)

1. Discuss in detail about types of enzyme immobilization techniques and their advantages and disadvantages.
2. Write in detail about structure and parts of a fermentor, its controls with a neat labelled diagram.

Short Notes

(7x5=35)

3. Production of Lipase.
4. Explain in brief about protein engineering.
5. Applications of biosensors in pharmaceutical industry.
6. Structure and role of MHC complex in immunity.
7. Discuss about the general preparation methods of toxoids with examples.
8. Write in detail about Gene transfer mechanism by conjugation.
9. Differentiate between humoral and cell mediated immunity with examples.

Answer Briefly

(10x2=20)

10. Antitoxins
11. PCR
12. ELISA
13. DNA ligase
14. Dried plasma
15. Define hypersensitivity
16. Immunoglobulins
17. Mutations
18. Define microbial biotransformation
19. Name one microorganism used for production of glutamic acid and griseofulvin

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**Sixth Semester B. Pharm Degree Supplementary Examinations
October 2023**

Pharmaceutical Quality Assurance

(2017 Scheme)

Time: 3 Hours

Max. Marks: 75

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- *Draw diagrams wherever necessary*

Essays

(2x10=20)

1. Discuss the concept of Material management and good warehousing practice in detail.
2. Describe the terminology of GLP and its emphasis on the provisions, organization, personnel, equipment and facility procedures followed in pharmaceutical industries.

Short Notes

(7x5=35)

3. State the procedure to follow to obtain ISO 9000 certification.
4. Explain the evaluation of complaints and waste disposal.
5. Give the quality control test for containers and rubber closures.
6. Explain general principles of Analytical method Validation.
7. What are the elements and tools of QbD Program.
8. Explain in detail about the document maintenance in pharmaceutical industry.
9. Explain the importance and scope of validation.

Answer Briefly

(10x2=20)

10. Classify the different types of audit.
11. At which condition revalidation is required.
12. How to Control the contamination in sterile area.
13. Explain the types of records.
14. List out the benefits of ISO 14000.
15. Define installation qualification and operational qualification.
16. Explain the quality control parameters for rubber and closures.
17. Explain purchase specification.
18. Define quality review.
19. Describe briefly about the plant layout.
