QP Code: 621006 **Reg. No…….**

Sixth Semester B. Pharm Degree Regular/Supplementary Examinations February 2024
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 Solid Phase and Solution Phase synthesis. Enlist the applications of Combinatorial Chemistry.
2. Classify Antitubercular agents with examples. Outline the synthesis and mechanism of action of Isoniazid.

Short Notes **(7x5=35)**

3. Explain the chemistry of Aminoglycosides with examples.
4. Outline the synthesis and uses of Chloroquine.
5. Classify Cephalosporins with examples.
6. Explain the SAR of Quinolines.
7. Write the synthesis and uses of Trimethoprim.
8. Classify Anthelmintics with examples.
9. Classify urinary tract anti-infective agents with examples.

Answer Briefly **(10x2=20)**

10. Enlist the various approaches used in drug design.
11. Give the structure and use of any one lactamase inhibitors.
12. Synthesis of acyclovir.
13. Outline the synthesis of Tolnaftate.
14. Any two antifungal antibiotics with their uses.
15. Write the structure of Metronidazole with its uses.
16. Write the structure of Sulfacetamide with its uses.
17. Write the structure and uses of monobactams.
18. Write the structure and uses of Proguanil.
19. Write the structure and uses of Dapsone.

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QP Code: 622006 **Reg. No……**

Sixth Semester B. Pharm Degree Regular/Supplementary Examinations February 2024
Pharmacology 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. Classify antiulcer agents. Explain the pharmacology H_2 receptor blockers in detail.
2. Classify antifungal drugs. Explain the pharmacology of cell wall inhibitors.

Short Notes **(7x5=35)**

3. Explain the pharmacology of fluoroquinolones.
4. Explain about gene transfer techniques.
5. Classify immunosuppressant drugs. Explain the mechanism of action, side effects of cyclosporine.
6. Classify anti-asthmatic drugs. Explain the pharmacology of theophylline.
7. Define emetics. Write the mechanism of action, uses of emetics.
8. Explain the pharmacology of anthelminthic drugs.
9. Explain the mechanism of action, adverse effects of penicillin.

Answer Briefly **(10x2=20)**

10. Classify nasal decongestants.
11. Classify bronchodilators with examples.
12. Define anti-emetics. Write the uses of anti-emetic drugs.
13. Define carminatives and digestants with examples.
14. Write the adverse effects of aminoglycoside antibiotics.
15. Explain the mechanism of action of tetracycline antibiotic.
16. Write the advantages of first line anti-tubercular agents.
17. Write the drugs used in urinary tract infection.
18. Outline the concepts of gene therapy.
19. What are biosimilars.

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QP Code: 623006 **Reg. No…….**

Sixth Semester B. Pharm Degree Regular/Supplementary Examinations February 2024
Herbal Drug Technology
(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. Give a detailed account of protective and bleaching agents used in herbal cosmetics.
2. Discuss on case study of Curcuma and Neem related to patenting of natural products.

Short Notes **(7x5=35)**

3. Briefly discuss the basic principles involved in Ayurveda.
4. Give the role of nutraceuticals in cancer.
5. Discuss herb-drug interactions of Hypericum.
6. Explain the role of natural sweeteners used in herbal cosmetics.
7. Briefly discuss on stability testing of herbal drugs.
8. Discuss briefly Machinery and equipments of herbal medicine industry.
9. Explain briefly herbal mixtures with an example.

Answer Briefly **(10x2=20)**

10. Distinguish between herbal medicinal product and herbal drug preparation
11. Organic farming
12. Preparation of Lehya.
13. Law of similaris
14. Types of products in nutraceuticals
15. Source, active constituents and uses of Ephedra
16. Scope of herbal drug industry
17. Farmers right
18. Define schedule Z
19. What are phytosomes

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QP Code: 624006 **Reg. No…….**

Sixth Semester B. Pharm Degree Regular/Supplementary Examinations February 2024
Biopharmaceutics and Pharmacokinetics

(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. Describe the various physiological barriers affecting distribution of drug .
2. Define metabolism. Explain the different types of phase I reactions with suitable examples.

Short Notes **(7x5=35)**

3. Briefly explain about mechanism of renal clearance.
4. Explain clinical significance of protein binding.
5. What is a compartment model. Discuss the various types of compartment models.
6. Discuss about criteria for obtaining a valid urine excretion data.
7. Explain two compartment open model.
8. Write a note on Invitro-invivo correlations.
9. Michaelis-Menten equation.

Answer Briefly **(10x2=20)**

10. Pharmaceutical equivalence and bioequivalence.
11. Fick's first law of diffusion.
12. Maximum Safe concentration, Minimum effective concentration.
13. Loading dose and maintenance dose.
14. Mean residence time.
15. What is the BCS classification.
16. Define Endocytosis.
17. Biopharmaceutics and pharmacokinetics.
18. Biological half life of a drug.
19. Define T max, Cmax.

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QP Code: 625006 **Reg. No…….**

Sixth Semester B. Pharm Degree Regular/Supplementary Examinations February 2024
Pharmaceutical Biotechnology
(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 types of enzyme immobilization add a note on preparation of amylase.
2. Explain the production of insulin by rDNA technology.

Short Notes **(7x5=35)**

3. Define MHC. (Major Histocompatibility Complex) Explain its structure and functions.
4. Outline the general storage and stability conditions for official vaccines. Give the storage conditions for two official vaccines
5. Explain types of ELISA.
6. Write a note on production of penicillin.
7. Write in details about southern blotting techniques.
8. Define mutation and explain its types.
9. Give difference between active and passive immunity.

Answer Briefly **(10x2=20)**

10. Protease
11. Application of genetic engineering in medicine.
12. Short note on cellular immunity.
13. Define microbial biotransformation.
14. Plasma substitutes.
15. Applications of hybridoma technology.
16. Immune suppression.
17. Transposons.
18. Name any two microorganisms used for production of vitamin B_{12} by fermentation.
19. Write a note on storage of whole human blood.

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QP Code: 626006 **Reg. No……**

Sixth Semester B. Pharm Degree Regular/Supplementary Examinations February 2024
Pharmaceutical Quality Assurance

(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 quality control tests for secondary packaging materials
2. Discuss the tools and elements of QbD program

Short Notes **(7x5=35)**

3. Explain the handling of return goods and waste disposal
4. Discuss the steps involved in validation master plan
5. Write a note on ICH stability testing guidelines
6. Explain calibration of pH meter
7. Explain types of quality audit
8. Explain disqualification of testing facilities
9. How a plant layout will be designed

Answer Briefly **(10x2=20)**

10. List the parameters in analytical method validation
11. What is GMP
12. Elements of TQM
13. Write a note on the principles of qualification
14. What is photo stability testing
15. Role of documentation in quality control
16. Define warehouse
17. What is a non-clinical laboratory
18. What is confirmed complaints
19. Define quality review

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