QP Code: 321006 **Reg. No…….**

Third Semester B. Pharm Degree Regular/Supplementary Examinations
August 2023
Pharmaceutical Organic Chemistry - II

(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 table/diagrams/flow charts wherever necessary***

Essays **(2x10=20)**

1. Outline any two methods of synthesis of phenanthrene and discuss four important reactions of phenanthrene
2. Explain the various analytical constants of fats and oils and explain the significance and principle involved in their determination.

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

3. Discuss the limitations of Baeyer's strain theory
4. Outline the Haworth synthesis of naphthalene
5. Discuss the effect of substituents on basicity of amines.
6. Important chemical reactions of anthracene
7. Discuss the qualitative tests for phenols
8. Explain sulphonation reactions of benzene with mechanism
9. Two important reactions of cyclobutane and cyclopropane

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

10. Structure and uses of DDT
11. Reichert Meissel value
12. Structure and medicinal uses of two naphthalene derivatives
13. Two uses of triphenyl methane
14. The structure and uses of chloramine
15. Sachse-Mohr's theory
16. Limitations of Friedelcrafts alkylation reaction
17. Hydrogenation reactions of oils
18. Huckel's rule
19. Two important synthetic uses of aryl diazonium salts

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QP Code: 322006 **Reg. No…….**

Third Semester B. Pharm Degree Regular/Supplementary Examinations August 2023
Physical Pharmaceutics I

(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 factors influencing the solubility of drugs.
2. Explain the methods for the determination of particle size of pharmaceutical powders.

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

3. Determination of surface area by adsorption of gas on powder.
4. The solubility of liquids in liquids based on ideal and real solution.
5. Sublimation critical points.
6. Assess the liquid complexes.
7. The different applications of complexation.
8. Give a methodology for determination of pH by colorimetric method.
9. Interpret the buffers in pharmaceutical and biological systems.

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

10. The pharmaceutical significance of pH.
11. How tonicity of hypotonic solution is adjusted by sodium chloride equivalent method.
12. Explain mole fraction.
13. The miscibility of liquids based on solubility.
14. Dielectric constant and its application in pharmacy.
15. Explain relative humidity and mention its importance.
16. Classify the metal ion coordination complexes.
17. Explain the methods of complex analysis techniques.
18. Angle of repose and its applications.
19. Bulkiness.

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QP Code: 323006 **Reg. No…….**

Third Semester B. Pharm Degree Regular/Supplementary Examinations August 2023

Pharmaceutical Microbiology

(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 table/diagrams/flow charts wherever necessary***

Essays **(2x10=20)**

1. Describe Rideal Walker test for disinfectant evaluation
2. Discuss two methods for isolation of pure cultures

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

3. Applications of cell culture technique
4. Evaluation of preservatives in pharmaceutical preparations
5. Explain bacterial growth curve.
6. Differentiate differential and selective media with examples
7. Methods for preservation of pure cultures
8. Differentiate gram positive and gram negative cell wall
9. Construction, principle, working and applications of hot air oven

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

10. Koch postulates
11. Spontaneous generation and biogenesis
12. Anaerobic media with an example
13. Suggest two methods each to determine viable count and total count of bacteria
14. Two examples each for anaerobes and aerobes
15. Differentiate bacteriostatic and bactericidal agents
16. Four examples for chemical indicators of sterilization
17. Types of microbiological assays
18. Two methods for virus cultivation
19. Evaluation of microbial stability of pharmaceutical formulations

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QP Code: 324006 **Reg. No……**

Third Semester B. Pharm Degree Regular/Supplementary Examinations August 2023

Pharmaceutical Engineering

(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 table/diagrams/flow charts wherever necessary***

Essays **(2x10=20)**

1. Describe the principle, construction, working and uses of Fluidized bed dryer with neat labelled diagram
2. Discuss about propellers, turbines and paddles with diagrams

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

3. Explain the different laws governing size reduction
4. Write the different grades of powders with standard IP specifications
5. Explain the construction and working of orifice meter with diagram
6. Explain the theories of heat transfer by radiation
7. Describe the theory of centrifugation
8. Explain the construction and working of horizontal tube evaporator with a neat diagram
9. Factors influencing selection of materials for Pharmaceutical plant construction

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

10. Belt conveyors
11. Define EMC and FMC in relation to drying
12. Enlist the factors influencing the filtration
13. Mechanisms of solid mixing
14. Uses of mechanical sieve shaker machine
15. Mechanisms of heat transfer
16. Differentiate between simple and steam distillation
17. Applications of super centrifuge
18. Advantages of hammer mill
19. Types of ferrous metals used in pharmaceutical plant design

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