

QP Code: 321006

Reg. No.....

**Third Semester B. Pharm Degree Regular/Supplementary Examinations  
June 2024**

**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. What are polynuclear hydrocarbons. Explain the methods of preparation and reactions of naphthalene
2. Define saponification value. Write the principle and procedure involved in its determination. What is the significance of saponification value

**Short Notes**

**(7x5=35)**

3. Explain the molecular orbital structure of benzene
4. Write the electrophilic substitution reactions of benzene
5. Write any two methods of preparation and any three reactions of phenanthrene
6. Explain the acidity of phenols
7. What is diazotization. Write any five synthetic uses of aryl diazonium salts
8. What are fats and oils. Explain the hydrolysis and hydrogenation of fats and oils
9. Explain why cyclohexane is more stable than cyclopropane

**Answer Briefly**

**(10x2=20)**

10. Friedal Craft's acylation reaction
11. State Huckel's rule
12. Write the structure and use of (a) Resorcinol (b) BHC
13. What is the effect of electron releasing groups on the acidity of phenols
14. Carbylamine reaction
15. Write the structure and use of any two medicinal compounds containing diphenyl methane nucleus
16. Acid value
17. Write any two reactions of phenols
18. Write any two methods of preparation of aromatic amines
19. Which of these is stable based on Baeyer's strain theory- Cyclohexane/ Cyclopropane. Give reason

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**Third Semester B. Pharm Degree Regular/Supplementary  
Examinations June 2024**

**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 Distribution law and write its applications and limitations
2. Discuss the methods used for the determination of surface area

**Short Notes**

**(7x5=35)**

3. Explain Raoult's law and its applications
4. Define dissociation constant and write its applications
5. What are different methods are determination of particle size. Explain any one method
6. Discuss the method of determination of angle of repose
7. Explain any one method of analysis of complexation
8. Explain the applications of buffers in pharmacy
9. Briefly discuss the importance of bulkiness and density in pharmacy

**Answer Briefly**

**(10x2=20)**

10. Mention the mechanisms of solute solvent interactions
11. What are eutectic mixtures
12. Explain amorphous state
13. Explain the importance of vapour pressure in pharmacy
14. Explain adsorption
15. Define porosity
16. Explain different classes of complexes
17. Sorenson's pH scale
18. Buffer capacity
19. Define isotonic solution

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**Third Semester B. Pharm Degree Regular/Supplementary  
Examinations June 2024  
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. Explain the methods of isolation of pure culture of bacteria and describe methods of preservation of pure culture.
2. Illustrate the principle and procedure involved in Gram's staining technique. Differentiate between the cell wall composition of Gram's positive and Gram's negative bacterial cell wall.

**Short Notes**

**(7x5=35)**

3. The contributions of Paul Ehrlich to the field of microbiology. List the applications of microbiology.
4. The principle and procedure involved in Voges–Proskauer test.
5. List the bacteriostatic evaluation tests for disinfectants and explain any two in detail.
6. With a neat-labeled diagram, explain the design of laminar airflow bench.
7. Enumerate the factors affecting microbial spoilage of pharmaceutical products. Explain any two factors among them.
8. Pharmaceutical preservatives.
9. The applications of cell cultures in pharmaceutical industry and research.

**Answer Briefly**

**(10x2=20)**

10. Cultivation of fungi
11. Sterilization method for medicated powders and thermolabile solutions.
12. Microorganisms used in the microbial assay of vitamin B<sub>12</sub> and Niacin.
13. Explain pasteurization
14. What are chemical indicators. Give two examples.
15. Differentiate between prokaryotes and eukaryotes.
16. Types of electron microscopes.
17. What are microaerophiles.
18. Give the structure of a virus.
19. What are cell lines. Types of cell lines.

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**Third Semester B. Pharm Degree Regular/Supplementary  
Examinations June 2024**

**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. Explain the principle, construction and working of super centrifuge.
2. Explain the principle, construction, working and applications of freeze dryer with a neat labelled diagram.

**Short Notes**

**(7x5=35)**

3. Explain the application and mechanism of drying process
4. Explain the principle and working of Fluid energy mill.
5. Discuss the construction of air separator with a diagram
6. Explain Reynolds number and its significance.
7. Types of corrosion and its prevention.
8. Explain the working of apparatus used in simple distillation process
9. Describe the principle and construction of climbing film evaporator

**Answer Briefly**

**(10x2=20)**

10. Labelled diagram of orifice meter.
11. Mechanism of size separation.
12. Factors affecting mixing.
13. Differentiate between evaporation and distillation.
14. Flash Distillation.
15. Factors affecting filtration.
16. Types of fractionating column.
17. Pneumatic conveyors.
18. Seidtz filter.
19. Propellers.

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