

QP Code: 321006

Reg. No.....

**Third Semester B. Pharm Degree Supplementary Examinations
December 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. Report on the analytical and synthetic evidences in the derivation of benzene.
2. Explain the process of hydrolysis and hydrogenation with suitable examples.

Short Notes

(7x5=35)

3. Summarize note on the basicity of amines.
4. Give a note on Meta directors.
5. Note down on the theory of strain less rings.
6. Mention the various reactions of naphthalene.
7. Discuss on Iodine value and Ester value.
8. Write the limitations of Bayer's strain theory.
9. Draw the structures of Sacharin, BHC, Diphenyl methane, Chloramine and Cresol

Answer Briefly

(10x2=20)

10. List out the medicinal uses of polynuclear hydrocarbons.
11. Write the structure and uses of phenanthrene.
12. Write the general reaction of Friedel-Craft's alkylation.
13. Distinguish between fats and oils.
14. Draw the orbital picture of benzene.
15. Write the synthesis of Triphenyl methane.
16. What do you mean by the term aromaticity.
17. Mention any four examples of mono substituted Benzene.
18. How are cyclo-alkanes prepared in general.
19. Write the synthetic uses of aryl diazonium salt.

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**Third Semester B. Pharm Degree Supplementary Examinations
December 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. Discuss any two methods of analysis of complexation.
2. Explain pH determination methods and write the applications of buffers.

Short Notes

(7x5=35)

3. Describe the mechanisms of solute solvent interactions.
4. State distribution law and write its applications.
5. Explain eutectic mixtures.
6. Explain any two methods of determination of particle size.
7. Describe the method of determination of flow properties of powders.
8. Explain Sorenson's pH scale.
9. Explain the significance of densities and bulkiness in pharmaceutical manufacturing.

Answer Briefly

(10x2=20)

10. State Raoult's law.
11. Importance of polymorphism.
12. Refractive index and optical rotation.
13. What are number and weight distribution of powders.
14. What is an isotonic solution.
15. Define buffer capacity.
16. What are the methods used to determine surface area.
17. Mention different solubility expressions.
18. Define real solutions.
19. What are liquid crystals.

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**Third Semester B. Pharm Degree Supplementary Examinations
December 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. Discuss sterility testing methods
2. Classify sterilization methods. Describe principle, equipment and procedure of moist heat sterilization

Short Notes

(7x5=35)

3. Bacterial growth curve
4. With a neat labelled diagram, illustrate the morphology of a bacterial cell
5. Outline the requirements in an aseptic area
6. Explain types of cell cultures
7. Discuss factors affecting microbial spoilage of food and pharmaceuticals
8. Explain principle and procedure of Acid-fast staining
9. Explain IM Vic test

Answer Briefly

(10x2=20)

10. Four contributions of Louis Pasteur
11. Name the microbiologist credited for the following
 - Discovery of Penicillin
 - Discovery of microscope
12. Classify clean areas
13. Differentiate plasmid and capsid
14. Differential media with an example
15. Classify bacteria based on shape
16. Two fungal diseases
17. Examples for two spore forming bacteria
18. Examples of two gaseous sterilization agents
19. Functions of bacterial capsule

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**Third Semester B. Pharm Degree Supplementary Examinations
December 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. Explain the theory of solid-solid mixing. Name the equipments used in solid-solid mixing. Describe the construction and working of any two mixers used in solid mixing.
2. Enumerate the various factors affecting during the selection of materials for pharmaceutical plant constructions. Discuss the role of ferrous as metal for pharmaceutical plant constructions.

Short Notes

(7x5=35)

3. Enumerate the working principles of filter press.
4. Explain the principle, construction, working and applications of vacuum dryer
5. Multiple effect evaporators.
6. Briefly explain the mechanisms and laws governing size reduction.
7. Discuss the construction and working principles of simple distillation.
8. Super centrifuge.
9. Explain Bernoulli's theorem and its applications.

Answer Briefly

(10x2=20)

10. Fluid flow-types.
11. Dalton's law.
12. Flash distillation
13. Filter aids.
14. Heat transfer methods.
15. Advantages of hammer mill.
16. Reynolds number.
17. Official standards of powders.
18. Black body and grey body.
19. Types of conveyors.
