

QP Code: 321006

Reg. No.....

**Third Semester B.Pharm Degree Regular/Supplementary
Examinations October 2021**

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 naphthalene and discuss four important reactions of naphthalene
2. Explain the effect of substituents on orientation of mono substituted benzene towards electrophilic aromatic substitution.

Short Notes

(7x5=35)

3. Discuss the limitations of Baeyer's strain theory.
4. Define acid value and explain the method of determination and significance.
5. Discuss the effect of substituents on acidity of phenols
6. Important chemical reactions of cyclobutane
7. Discuss the basicity of amines
8. Explain halogenation reactions of benzene with mechanism
9. Write two important reactions of diphenyl methane and triphenyl methane

Answer Briefly

(10x2=20)

10. Structure and uses of BHC
11. Huckel's rule
12. Structure and uses of naphthols
13. Limitations of Friedelcrafts alkylation
14. Define fats and oils with examples
15. Significance of carbylamine test
16. Coulson and Moffitt's modification
17. Reimer Tiemann reaction
18. Rancidity of oils
19. Define ester value and give its significance

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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. Assess in detail about the ideal and non-ideal solution based on the solubility of non-electrolytes in liquids.
2. Examine how particle volume is measured by electrical method.

Short Notes

(7x5=35)

3. Outline the merits and demerits of microscopic technique in particle size distribution and how it can be improved.
4. Evaluate the effect of temperature with respect to solubility.
5. Explain distribution law and its applications.
6. What are solids. How amorphous and crystalline solids are distinguished.
7. Humidity and its importance in pharmaceutical science.
8. Applications of complexation.
9. Explain isotonic solution. Give a detailed method of cryoscopy technique.

Answer Briefly

(10x2=20)

10. Differentiate between solution and binary solution.
11. Classify the solution based on liquids in liquids.
12. How gases can be liquefied.
13. Define refractive index and mention any two applications of the same.
14. Enlist the methods available for particle size analysis.
15. Explain porosity.
16. Dissociation constant.
17. Particle shape.
18. Stability constant
19. How the tonicity is measured.

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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. Detail the methods of preservation of microbial cultures. Write a note on the various components of a bacterial culture media.
2. Explain the various phases of growth curve of a batch culture.

Short Notes

(7x5=35)

3. Design and operation of laminar flow equipment
4. Microbiological assay of antibiotics
5. Design and operation of electron microscope
6. Explain the various sterility tests performed on pharmaceutical products
7. Reproduction of bacteria
8. Determination of Rideal-Walker coefficient
9. Explain gaseous sterilisation

Answer Briefly

(10x2=20)

10. Principle of light microscopy
11. What are chemical indicators
12. Explain the procedure of ditch-plate method of disinfectant evaluation
13. Explain pasteurisation
14. Explain tyndallization
15. Transformed cell cultures
16. Functions of bacterial cell wall
17. Explain the mode of action of any two disinfectants
18. Classification of clean areas
19. Differentiate flagella and pili

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Examinations October 2021**

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 perforated basket centrifuge with a neat labelled diagram
2. Explain principle, construction, working, uses of steam distillation process with a neat labelled diagram

Short Notes

(7x5=35)

3. Explain the principle, construction and working of ball mill.
4. State Bernoulli's theorem with equation and give two applications.
5. Explain working of double cone blender with diagram.
6. Discuss the construction and working of cyclone separator.
7. Explain the working of multiple effect evaporator.
8. Describe drying rate curves
9. Explain heat exchanger with a labelled diagram

Answer Briefly

(10x2=20)

10. Demerits of fractional distillation process.
11. Types of manometers.
12. Factors affecting size reduction.
13. Merits of Sieve shaker
14. Difference between solid and liquid mixing
15. Applications of evaporation
16. Heat interchangers
17. Filter aids
18. Theory of corrosion
19. Types of conveyors.
