QP Code: 321006 **Reg. No…….**

Third Semester B. Pharm Degree Supplementary Examinations April 2022

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. Elucidate the structure of benzene on the basis of analytical, synthetic and other evidences
2. Discuss the synthetic utility of aryl diazonium salts

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

3. Write the reactions of cyclopropane
4. Define and classify polynuclear hydrocarbons with examples. Write any three reactions of anthracene
5. Discuss the methods of preparation of triphenyl methane. Give the names and uses of any two medicinal compounds containing this nucleus.
6. State and explain Huckel's rule
7. Define ester value and write its significance. Explain the principle involved in its determination
8. Explain the effect of substituents on the basicity of amines
9. Write any two methods of preparation and any three reactions of phenol

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

10. Write the structure and use of (a) DDT (b) Chloramine
11. What are ortho-para directors. Give examples
12. What is Hoffmann rearrangement
13. Why aromatic amines are less basic than aliphatic amines
14. Write any two reactions of fatty acids
15. Draw the strainless conformations of cyclohexane. Comment on the stability of these forms.
16. Limitations of Friedel Crafts reactions
17. Write any two reactions of naphthalene
18. What is carbylamine reaction
19. What happens when phenol is treated with (a) Conc.HNO_3 (b)Aqueous bromine

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QP Code: 322006 **Reg. No……**

Third Semester B. Pharm Degree Supplementary Examinations April 2022

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. Define micromeretics. Explain any two methods for determining particle size of a sample.
2. Define complexation. Classify different types of complexes. Explain any two methods of complex analysis

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

3. Eutectic mixtures.
4. Explain pH determination and its applications.
5. Solvation and association.
6. Explain critical solution temperature and its applications.
7. Explain the methods of determining flow properties of a given sample.
8. Raoult's law and explain its deviations.
9. Determination and application of dielectric constant.

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

10. Buffer capacity.
11. Refractive index
12. Liquid crystals.
13. Stability constants.
14. Phase rule
15. Particle number
16. Protein binding of drugs.
17. Dipole moment
18. Propellants used in aerosols.
19. Sorenson's pH scale

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QP Code: 323006 **Reg. No…….**

Third Semester B. Pharm Degree Supplementary Examinations April 2022

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 the methods used in the isolation of pure cultures of bacteria
2. Explain dry heat sterilization

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

3. Nutritional requirements of bacteria
4. Preservation of pharmaceutical products
5. Explain the methods of cultivation of viruses
6. Phenol coefficient tests
7. Design of aseptic area
8. Microbial assay of antibiotics
9. Detail the various methods of cultivation of anaerobic bacteria

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

10. Evaluation of microbial stability of pharmaceutical products
11. Define prophage
12. Procedure of animal cell culture
13. Different types of reproduction in fungi
14. Cell wall composition of procaryotes
15. Tyndallization
16. Types of flagellar distribution
17. Principle of Gram's staining method
18. Differentiate antisepsis and disinfection
19. Principle of phase-contrast microscope

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QP Code: 324006 **Reg. No…….**

Third Semester B. Pharm Degree Supplementary Examinations April 2022

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 and factors affecting size reduction. Discuss in detail about fluid energy mill. (4+6)
2. Define corrosion. Classify the types of corrosion. Explain in detail about the methods for its prevention.

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

3. Explain about the Bernoulli's theorem and its applications.
4. Discuss the working principle of cyclone separator with neat diagram.
5. Planetary mixer.
6. Explain about multiple effect evaporators.
7. Discuss the working principles of plate and frame filter.
8. Stainless steel as material for plant construction.
9. Fourier's law of heat transfers by conduction across a metal wall

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

10. Applications of filtration.
11. Pneumatic conveyor
12. Types of glass as material for plant construction.
13. Turbulent flow.
14. Raoult's law.
15. Stefan Boltzmann law
16. Bonds theory and its importance
17. Rotameter
18. Bound water.
19. Filter aids.

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