QP Code: 321006 **Reg. No……**

Third Semester B. Pharm Degree Supplementary Examinations May 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. Describe the Friedel Craft's reactions with its limitations.
2. What are polynuclear hydrocarbons. Mention the synthesis and reactions of diphenyl methane and phenanthrene.

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

3. Give a note on the effects of substituents on acidity of phenols.
4. Summarize on ortho and para directors.
5. Write down on Baeyer's strain theory.
6. Mention the various reactions of fatty acids.
7. Discuss the qualitative tests of phenols and write the structure of naphthols.
8. Write the principle and significance of RM value.
9. List the uses of DDT, BHC, Phenol, chloramine and cresol.

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

10. Write the structure of cyclobutane and naphthalene.
11. What do you mean by the term basicity.
12. Give any two reactions of aromatic amines.
13. Give any one example for a saturated and an unsaturated organic compound.
14. Give two salient features of oils.
15. Write the general reaction of halogenation of benzene.
16. Give the structures of cyclo alkanes.
17. Mention any four derivatives of Benzene.
18. What is meant by Rancidity.
19. Write the structure and uses of resorcinol.

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QP Code: 322006 **Reg. No…….**

Third Semester B. Pharm Degree Supplementary Examinations
May 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 five physicochemical properties of drugs. Explain their determination and applications.
2. Define buffer and buffer capacity. What are buffered isotonic solutions. How they are prepared. Explain. (4+2+4)

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

3. Fick's law of diffusion and its uses
4. What are the different ways of expressing solubility. Write their uses.
5. What is Raoult's law and its applications. Explain.
6. What are the applications of distribution law. Explain.
7. Discuss the solubility of gases in liquids.
8. How surface area can be determined. Explain. What are its uses.
9. Define true density, bulk density, porosity, angle of repose and write their uses.

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

10. What is solvation
11. What is critical solution temperature
12. Particle number
13. What are Clathrates
14. Any two uses of complexation in pharmacy
15. What are eutectic mixtures. Give examples.
16. The influence of relative humidity on storage of pharmaceuticals.
17. What is the difference between amorphous and crystalline state of drug
18. pH determination by electrometric method.
19. What are smectic crystals.

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QP Code: 323006 **Reg. No…….**

Third Semester B. Pharm Degree Supplementary Examinations May 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. Explain the principle and procedure involved in acid fast staining technique. Give two examples each for acidic, basic and negative stains.
2. List the bacteriostatic and bactericidal methods for evaluation of disinfectants and explain phenol co-efficient method.

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

3. Nutritional requirements of bacteria
4. Classify preservatives with example.
5. With a neat-labeled diagram, explain the structure of bacterial flagella.
6. Explain the principle and procedure involved in sterility testing of sterile products
7. Physical and chemical indicators used for evaluation of sterilizers.
8. The contributions of Louis Pasteur and Robert Koch to the field of microbiology.
9. Enlist the factors affecting disinfectant activity and explain any three factors in detail.

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

10. What are primary and transformed cell cultures
11. List any four factors affecting microbial spoilage of pharmaceuticals.
12. Morphological classification of fungi
13. Expand the following CFU and IMViC.
14. Sterilization method for eye drops and surgical blades.
15. Enumerate the methods of cultivation of virus.
16. Lyophilization and cryopreservation.
17. Streak plate technique
18. List any two applications each of UV and gamma radiation sterilization.
19. Define and classify clean area.

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QP Code: 324006 **Reg. No…….**

Third Semester B. Pharm Degree Supplementary Examinations May 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 heat transmission through a circular pipe by Fourier's law using suitable equations and a labelled diagram.
2. Explain the principle, construction and working of fluidized bed dryer with a labelled diagram.

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

3. Explain the construction and working of non-perforated basket centrifuge.
4. Explain the construction of Hammer mill with its demerits.
5. Bag filter with a diagram.
6. Explain Energy losses for flow of fluids.
7. Working of planetary mixer with a labelled diagram.
8. Differentiate between Meta filter and cartridge filter with diagrams.
9. Describe the principle and construction of horizontal tube evaporator.

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

10. Labelled diagram of venturi meter.
11. Mechanism of size reduction.
12. Factors influencing evaporation.
13. Economy of multiple effect evaporators.
14. Demerits of Sieve shaker.
15. Types of heat transfer mechanisms.
16. Application of fractional distillation.
17. Screw conveyors.
18. Turbines.
19. Filter medias.

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