ADICHUNCHANAGIRI UNIVERSITY

B. Pharmacy III Semester Examination – October 2020

TIME: 2 Hours   MAX.MARKS: 40

SUB: Pharmaceutical Microbiology

QP CODE: 11323

Specific Instructions

1. Answer One Question from **Long Essay** (Each question carries 10 Marks).
2. Answer Four Questions from **Short Essay** (Each question carries 5 Marks).
3. Answer all **Short answers** (Each question carriers 2 Marks)
4. Write the Question followed by Answer.
5. Write the same question numbers as they appear in this question paper.
6. Your answer should be specific to the questions asked.
7. Draw neat labelled diagrams wherever necessary.

Long Essay: Answer **any One**   1X10=10

1. With a neat labelled diagram explain the morphology and fine structure of bacteria.

2. Enlist the properties of an ideal disinfectant. Explain the influence of concentration and contact time on course of disinfectant action.

Short Essay: Answer **any Four**   4X5=20

3. Enlist methods of isolation of pure culture and explain any one method in detail.

4. Outline the principle involved in Citrate utilization test and indole production test reactions.

5. Write briefly on determination of MIC using fluid media. Compare it with the MIC determination in solid medium.

6. With a neat floor diagram, describe the design of an aseptic area. Add a note on different types of laminar flow units

7. Explain in detail about sterilization indicators.

8. Describe methods of disaggregation of tissues for cell culture.

Short Answers: Answer **All** the questions   5X2=10

9. Enlist Koch's postulates.

10. Mention how Mycobacterium can be stained in the laboratory. Explain the principle involved.

11. List out advantages of growing viruses in embryonic eggs.

12. Enlist and describe the importance of control tubes in tube dilution assay of antibiotics.

13. Mention the specific tests suggested by IP for the determination of microbial load of a pharmaceutical preparation.

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ADICHUNCHANAGIRI UNIVERSITY

B. Pharmacy III Semester Examination – October 2020

TIME: 2 Hours   **MAX.MARKS: 40**

SUB: Pharmaceutical Engineering

QP CODE: 11324

Specific Instructions

1. Answer One Question from **Long Essay** (Each question carries 10 Marks).
2. Answer Four Questions from **Short Essay** (Each question carries 5 Marks).
3. Answer all **Short answers** (Each question carriers 2 Marks)
4. Write the Question followed by Answer.
5. Write the same question numbers as they appear in this question paper.
6. Your answer should be specific to the questions asked.
7. Draw neat labelled diagrams wherever necessary.

Long Essay: Answer **any One**   1X10=10

1. Classify Evaporators. Describe principle, construction, working, advantages and disadvantages of climbing film evaporators

2. State Fourier's Law. Derive an equation for heat transfer by conduction through a metal wall

Short Essay: Answer **any Four**   4X5=20

3. Explain the construction and working of the Rapisonic Homogenizer.

4. Explain the principle construction and working of simple distillation. Write its applications.

5. Explain the principle of freeze drying? What are its application in pharmacy

6. Describe the construction and working of supercentrifuge.

7. Explain the principle, construction and working of filter press

8. Explain the principle, construction and working Hammer Mill

Short Answers: Answer **All** the questions   5X2=10

9. State Rittinger's law

10. What is calendria? Write its importance

11. What is Reynolds number? Describe its importance

12. Write the uses of rubber as a packaging material

13. What are the factors influencing centrifugal effect

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ADICHUNCHANAGIRI UNIVERSITY

B.Pharmacy III Semester Examination – October 2020

TIME: 2 Hours   MAX.MARKS: 40

SUB: Pharmaceutical Organic Chemistry II

QP CODE: 11321

Specific Instructions

1. Answer One Question from **Long Essay** (Each question carries 10 Marks).
2. Answer Four Questions from **Short Essay** (Each question carries 5 Marks).
3. Answer all **Short answers** (Each question carriers 2 Marks)
4. Write the Question followed by Answer.
5. Write the same question numbers as they appear in this question paper.
6. Your answer should be specific to the questions asked.
7. Draw neat labelled diagrams wherever necessary.

Long Essay: Answer any One   1X10=10

1. Explain electrophilic aromatic substitution reaction? Discuss the mechanism of Nitration and Friedel- craft acylation.

2. Define fats and oils. Give any two reactions of fatty acids. Define and explain the Principle Involved In the determination of Saponification Value.

Short Essay: Answer any Four   4X5=20

3. Define activating and deactivating groups with examples. Discuss the Sulphonation of benzene.

4. Explain the basicity and effect of substituent on basicity of amines.

5. Discuss the synthetic applications of aryl diazonium salts.

6. Discuss the mechanism of friedel craft alkylation with its limitations.

7. Explain Haworth synthesis of naphthalene

8. What are aromatic acids? Explain effect of substituent on acidity of aromatic acids.

Short Answers: Answer All the questions   5X2=10

9. Give the structure and uses of Cresols and Resorcinol.

10. State huckel rule.

11. Why cyclopropane is less stable than cyclobutane.

12. What is Sache –Mohr's theory? Explain.

13. Give the Synthesis Of Benzoic Acid.

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ADICHUNCHANAGIRI UNIVERSITY

B. Pharmacy III Semester Examination – October 2020

TIME: 2 Hours

MAX.MARKS: 40

SUB: Physical Pharmaceutics I

QP CODE: 11322

Specific Instructions

1. Answer One Question from **Long Essay** (Each question carries 10 Marks).
2. Answer Four Questions from **Short Essay** (Each question carries 5 Marks).
3. Answer all **Short answers** (Each question carriers 2 Marks)
4. Write the Question followed by Answer.
5. Write the same question numbers as they appear in this question paper.
6. Your answer should be specific to the questions asked.
7. Draw neat labelled diagrams wherever necessary.

Long Essay: Answer any One

1X10=10

1. Describe the method of determining solubility of solids in liquids

2. Define dipole moment. Explain in detail its method of determination

Short Essay: Answer any Four

4X5=20

3. Define critical solution temperature and mention their applications.

4. Explain the determination of refractive index by Abbey's refractometer.

5. Write the applications of buffers in pharmaceutical and biological system

6. State and explain Nernst Distribution law along with its limitations.

7. Define optical rotation. Discuss in brief working of polarimeter.

8. Give the principle and working of Dunoy's tensiometer

Short Answers: Answer All the questions

5X2=10

9. State buffer equation for weak acid and its salt.

10. Define Surface tension and interfacial tension.

11. What is Spreading coefficient? Give its significance.

12. Enumerate different methods of analysis of complex.

13. Give applications of Critical solution temperature

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