ADICHUNCHANAGIRI UNIVERSITY

B.Pharmacy III Semester Examination – January 2022

TIME: 3 Hours **MAX.MARKS: 75**

SUB: Pharmaceutical Organic Chemistry II
QP CODE:11321

Instructions: 1. Your answer should be specific to the questions asked.
2. Write the same question numbers as they appear in this question paper.
3. Write Legibly.
4. Draw neat labelled diagrams wherever necessary

Long Essay: Answer **any Two** **2X10=20**

1. Write the general mechanism of Electrophilic aromatic substitution reaction with suitable example. Discuss the orientation effect of Hydroxyl Group and Nitro Group in Benzene.
2. Explain the basicity and effect of substituent on basicity of amines. Add a note on aryl diazonium salts.
3. Define Polynuclear hydrocarbon. Explain the Haworth and Pschorr synthesis in Phenanthrene with its chemical reactions.

Short Essay: Answer **any Seven** **7X5=35**

4. Explain the Aromaticity, Orbital Picture and Resonance structure of benzene.
5. Write any three syntheses and reaction of anthracene.
6. Discuss about relative Stabilities of Cycloalkanes.
7. What is chemical character of Fats? Explain difference between Oils and Fats with their Industrial Use?
8. Explain acidic nature of aromatic acid.
9. Discuss the Bayer's strain theory with limitations.
10. Explain in detail about ester value and iodine value. Write the principle and procedure adopted in both.
11. Halogens are deactivating group but ortho and para director. Give reasons.
12. Write any four chemical reactions of cyclopentane.

Short Answers: Answer **All** the questions **10X2=20**

13. Give the Structure and uses of saccharin.
14. Write qualitative test for phenol.
15. Describe Sandmeyer's Reaction
16. Write the structure and medicinal use of diphenyl methane.
17. Outline sulphonation in benzene.
18. Define rancidity with its significance.
19. Give Diels Alder Reaction.
20. Write the structure and uses of DDT and cloramine.
21. How do you calculate the angle in cypropane.
22. Gattermann's synthesis.

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B.Pharmacy III Semester Examination – January 2022

TIME: 3 Hours **MAX.MARKS: 75**

SUB: Pharmaceutical Engineering
QP CODE:11324

Instructions: 1. Your answer should be specific to the questions asked.
2. Write the same question numbers as they appear in this question paper.
3. Write Legibly.
4. Draw neat labelled diagrams wherever necessary

Long Essays: Answer any Two 2X10=20

1. Describe the construction and working of belt conveyor system for solid transport.
2. Explain with the help of a diagram the construction and working of a ball mill.
3. Discuss the devices used for liquid-liquid mixing.

Short Essays: Answer any Seven 7X5=35

4. Explain principle and working of cyclone separator.
5. Write the construction and working of climbing film evaporator.
6. Describe the conduction of heat through compound resistances in series.
7. Explain briefly the mechanism of filtration.
8. Classify industrial centrifuges. Write construction and working of a perforated basket centrifuge.
9. What is corrosion? Mention the factors that influence rate of corrosion.
10. Describe the construction and working of a screw conveyor.
11. Classify the materials of construction. Explain the uses of ferrous metals.
12. Write the theory of centrifugation.

Short Answers: Answer All the questions 10X2=20

13. Define the term 'head'. List the different heads in the Bernoulli's theorem.
14. Define 'relative volatility' and write its significance.
15. List the properties of filter aids.
16. Write Stefan Boltzmann equation.
17. Compare and contrast the advantages and disadvantages of pitot tube and rotameter.
18. What are the factors influencing mixing of solids?
19. Differentiate log mean radius and arithmetic mean radius in conduction of heat. What are its applications?
20. Write composition of glass and its application in pharmacy.
21. What are various grades of course powders? Define them.
22. Define 'overall heat transfer coefficient' and 'individual film coefficient'.

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ADICHUNCHANAGIRI UNIVERSITY

B. Pharmacy III Semester Examination – January 2022

TIME: 3 Hours **MAX.MARKS: 75**

SUB: Pharmaceutical Microbiology
QP CODE:11323

Instructions: 1. Your answer should be specific to the questions asked.
2. Write the same question numbers as they appear in this question paper.
3. Write Legibly.
4. Draw neat labelled diagrams wherever necessary

Long Essays: Answer any Two 2X10=20

1. Differentiate between gram positive and Gram negative cell wall. Add a note on principle and procedure of Gram's staining technique.
2. Explain the principle and operating procedure of Industrial autoclave along with a neat labeled diagram.
3. What are disinfectants? Classify and explain their mode of action with examples.

Short Essays: Answer any Seven 7X5=35

4. Write salient feature of differential and selective media along with examples.
5. Write the principle and design of electronic microscopy.
6. Write the procedure, merits and demerits of ethylene oxide sterilization.
7. Explain the methods to evaluate bacteriostatic activity.
8. Discuss the microbial assay of cyanocobalamine.
9. Elaborate the designing of aseptic area for manufacturing of parentral preparation.
10. What are preservatives? Explain their importance in pharmaceutical products.
11. Explain the method of sterility testing in antibiotics.
12. Explain the significance of animal cell culture in production of monoclonal antibodies.

Short Answers: Answer All the questions 10X2=20

13. Write contributions of Alexander Fleming.
14. Write bio-indicators for thermal sterilization
15. What is incineration?
16. What is tyndallization?
17. Write the ideal properties of an antiseptic.
18. What is 'Zone of inhibition'?
19. Name the disease caused by fungus.
20. What is the role of agar in culture media
21. Explain the significance of positive and negative control in sterility testing.
22. Name any two compounds used for disinfection of water, mention their mechanism of action

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B.Pharmacy III Semester Examination – January 2022

TIME: 3 Hours **MAX.MARKS: 75**

SUB: Physical Pharmaceutics I
QP CODE:11322

Instructions: 1. Your answer should be specific to the questions asked.
2. Write the same question numbers as they appear in this question paper.
3. Write Legibly.
4. Draw neat labelled diagrams wherever necessary

Long Essay: Answer **any Two** **2X10=20**

1. Define Solubility? Discuss in detail factors influencing solubility of drugs.
2. Define Refractive Index. Discuss in detail working of Abbe's refractometer.
3. Describe the Griffin's HLB scale. Explain the different methods to determine HLB value? Give applications of HLB value.

Short Essay: Answer **any Seven** **7X5=35**

4. Describe factors affecting solubility of gas in liquids.
5. Define Dipole Moment. Write a note on its application in pharmacy.
6. Explain in detail measurement of surface tension by capillary rise method.
7. Write a note on Inclusion complexes.
8. Write a note on polymorphism and give its applications.
9. Define distribution law? Explain the limitations of the law.
10. List out analysis methods for complexes? Explain any one method.
11. Write a note on physiological and Pharmaceutical buffers.
12. Explain Sorensen's pH scale

Short Answers: Answer **All** the questions **10X2=20**

13. Define Surface tension.
14. What do you mean by glassy states?
15. What is Detergency?
16. Define Raoult's Law?
17. What are chelates?
18. Give any four Applications of complexes.
19. Define isotonicity with examples.
20. Give examples for organic molecular complexes.
21. Write Henderson Hasselbalch equation.
22. List out the applications of optical rotation in pharmacy.

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