DR. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY, LONERE

Supplementary Summer Examination – 2024

Course: B. Pharmacy **Semester: III**

Subject Name: Pharmaceutical Organic Chemistry- II **Subject Code: BP301T**

Max Marks: 75 **Date: 12-06-2024** **Duration: 3 Hr.**

Instructions to the Students:

1. All questions are compulsory

2. Draw diagrams / figures wherever necessary

3. Figures to right indicate full marks

Q.1. Objective Type Questions (Answer All the Questions) **(10X2) =20**

i) Define iodine value. Give its significance

ii) Draw the structure and general uses of Saccharin.

iii) Enlist the analytical constants of fats and oils.

iv) Write the structure and medicinal uses of Anthracene.

v) Draw the structure of resorcinol and 2-naphthol.

vi) Enlist four ortho, para and meta director from each class.

vii) What is Aromaticity? Why benzene is called as an aromatic compound?

viii) Draw the structure of BHC and Chloramine.

ix) What is Saponification value and give its significances.

x) What are some limitations of baeyer's strain theory?

Q.2. Long Answers (Answer 2 out of 3) **(10X2) =20**

i) What are polynuclear aromatic hydrocarbons? Give the synthesis reactions of naphthalene, Phenanthrene.

ii) Explain nitration, sulphonation and halogenation of benzene with examples and Mechanism.

iii) Explain the principle & procedure involved in the determination of acid value of oil Sample.

Q.3. Short Answers (Answer 7 out of 9) **(5 X 7) = 35**

i) Despite being ortho and para director, chlorine exhibit deactivating properties within a molecule.

ii) Explain the facts supporting kekule structure of Benzene.

iii) Explain the effect of substituents on acidity of phenols.

iv) Discuss the method of synthesis of cyclopropane and cyclobutane.

v) Explain the Huckel's rule for naphthalene and Anthracene.

vi) Discuss the basicity of aromatic amines.

vii) What is the diazonium reaction? Explain the general reaction?

viii) Add a note on the chemical reaction of Anthracene.

ix) Discuss Bayer's strain theory with suitable examples.

***** END OF THE PAPER *****

DR. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY, LONERE

Supplementary Summer Examination – 2024

Course: B. Pharmacy | **Semester: III**

Subject Name: Physical Pharmaceutics I | **Subject Code: BP302T**

Max Marks: 75 | **Date: 14-06-2024** | **Duration: 3 Hr.**

Instructions to the Students:

1. **All questions are compulsory**
2. **Draw diagrams / figures wherever necessary**
3. **Figures to right indicate full marks**

Q.1. Objective Type Questions (Answer All the Questions) **(10 X 2) = 20**

i) Define and classify ligand

ii) Match the pair

a. Capillary Rise Method	Youngs
b. Ring Detachment Method	DuNuoy
c. Maximum Bubble Pressure Method	Laplace
d. Stalagmometric Method	Ostwald

iii) Define and express the term pH

iv) Differentiate between Crystalline solid and amorphous solid

v) State and explain the kinetic molecular theory of gas.

vi) Explain Biopharmaceutical Classification System

vii) Write a short note on Spreading Coefficient

viii) State the importance of complexation.

ix) Justify the statement - "Solubility of gas decreases with increase in temperature"

x) Define and classify ligand.

Q.2. Long Answers (Answer 2 out of 3) **(10 X 2) = 20**

i) Define and elaborate the structure, type and working of Surface active agents

ii) State and explain different gas laws.

iii) Enlist and elaborate different factors affecting solubility of drug.

Q.3. Short Answers (Answer 7 out of 9) **(5 X 7) = 35**

i) State and explain Capillary Rise method for determination of surface tension or interfacial tension.

ii) Explain method of continuous variation in study of a complex.

iii) Write a note on buffered isotonic solution

iv) Draw a neat labelled diagram and highlight the changes in states of matter.

v) State and explain Phase rule.

vi) Explain different methods for determination of pH.

vii) Enlist the applications and limitations of Nernst Distribution Law.

viii) Define surface tension and interfacial tension. State why the Interfacial tensions are less than surface tensions

ix) Write a note on protein drug binding

***** END OF THE PAPER *****

DR. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY, LONERE

Supplementary Summer Examination – 2024

Course: B. Pharmacy **Semester: III**

Subject Name: Pharmaceutical Microbiology **Subject Code:BP303T**

Max Marks: 75 **Date: 18-06-2024** **Duration: 3 Hr.**

Instructions to the Students:

1. **All questions are compulsory**
2. **Draw diagrams / figures wherever necessary**
3. **Figures to right indicate full marks**

Q.1. Objective Type Questions (Answer All the Questions) **(10X2) =20**

i) Write importance of microbiology

ii) Differentiate between prokaryotes and eukaryotes

iii) Define aerobic and anaerobic bacteria

iv) Define D value and Z value

v) Classify disinfectant

vi) Draw a well labeled diagram of laminar air flow

vii) Write about growth curve phase of bacteria

viii) Define bacteriostatic and bactericidal

ix) Write importance of fungi

x) Write characteristics of viruses

Q.2. Long Answers (Answer 2 out of 3) **(10X2) =20**

i) Explain in details about the structure of bacterial cell

ii) Define sterilization. Explain different methods of sterilization

iii) Explain in details about the lytic cycle of bacteriophage

Q.3. Short Answers (Answer 7 out of 9) **(5 X 7) = 35**

i) Discuss about contribution of Louis Pasture

ii) Explain simple and gram staining technique

iii) Explain in details about sterility testing

iv) Discuss the different sources of contamination in an aseptic area

v) Explain factors affecting the microbial spoilage of pharmaceutical products

vi) Discuss about IMViC test

vii) Write application of animal cell culture

viii) Write principle and methods of microbiological assay of antibiotics

ix) Explain in details about preservation of pharmaceutical products

***** END OF THE PAPER *****

DR. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY, LONERE

Supplementary Summer Examination – 2024

Course: B. Pharmacy **Semester: IV**

Subject Name: PHARMACEUTICAL ENGINEERING **Subject Code: BP304T**

Max Marks: 75 **Date: 20-06-2024** **Duration: 3 Hr.**

Instructions to the Students:

1. **All questions are compulsory**
2. **Draw diagrams / figures wherever necessary**
3. **Figures to right indicate full marks**

Q.1.	**Objective Type Questions (Answer All the Questions)**	**(10 X 2) = 20**
i)	In short explain size separation and its importance in pharmacy.	
ii)	Give mechanism of size reduction	
iii)	Draw neat and labelled diagram for plate & frame filter used in filtration process.	
iv)	Define centrifugation. Give applications of centrifugation.	
v)	Ball mill is not useful for size reduction of fibrous material. Explain.	
vi)	What are manometers? What different types of manometers do you know?	
vii)	Give statement for, along with equation, for Fourier's law.	
viii)	What is sieve shaker?	
ix)	Give heat transfer mechanisms	
x)	Give mechanism of size separation	
Q.2.	**Long Answers (Answer 2 out of 3)**	**(10 X 2) = 20**
i)	Define distillation. Explain the principle and working of steam distillation	
ii)	Classify equipments used for mixing of semisolids. Describe the principle, construction and working of ribbon blender.	
iii)	What do you mean by fluid flow, fluid statics and fluid dynamics? Differentiate between orifice meter and venturimeter. Describe venturimeter in detail.	
Q.3.	**Short Answers (Answer 7 out of 9)**	**(5 X 7) = 35**
i)	Explain the Reynold's experiment, give its significance.	
ii)	Explain principle, construction, working of perforated basket centrifuge.	
iii)	Explain principle, construction & Working of Ball mill.	
iv)	Explain theory & factors affecting filtration.	
v)	Explain principle, construction & working of cyclone separator.	
vi)	Explain principle, construction, working & uses of fluidized bed dryer.	
vii)	Differentiate between evaporation, distillation and drying. Explain the factors affecting evaporation.	
viii)	Explain the principle of molecular distillation.	
ix)	Explain principle, construction, working & uses of planetary mixer.	

***** END OF THE PAPER *****