

DR. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY, LONERE

End Semester Examination – Winter 2023

Date: 02/01/2024

Course : B. Pharmacy

Sem: III

Subject Name: Pharmaceutical Organic Chemistry-II

Subject Code: BP301T

Max Marks : 75

Duration : 3Hr.

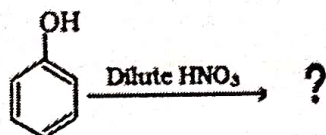
Instructions:

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 saponification value. Give its significance.
- ii) Draw structure and give medicinal uses of naphthalene.
- iii) Write synthetic uses of aryl diazonium salts.
- iv) Predict the product:



- v) Discuss limitations of Friedel crafts alkylation.
- vi) Draw structure and write uses of BHC.
- vii) Give reason: Though halogens are o,p-directors, they are ring deactivators.
- viii) Draw structures of derivatives of anthracene and phenanthrene.
- ix) Write Huckel's rule of aromaticity with suitable example.
- x) Write any two reactions of cyclopropane.

(2 x 10) = 20

Q. 2. Long Answers (Answer 2 out of 3)

- i) What are phenols? Explain acidity of phenols. Write any three methods of preparation and three reactions of phenols.
- ii) Enlist analytical constants of oils and fats. Discuss in detail about iodine value and Reichert-Meissl value and give their significance.
- iii) Discuss analytical, synthetic and other evidences in the derivation of structure of benzene.

(7 x 5) = 35

Q. 3. Short Answers (Answer 7 out of 9)

- i) Discuss Baeyer's strain theory with its limitations.
- ii) Explain hydrogenation and saponification reactions of fats and oils.
- iii) Write ring substitution reactions of aromatic amines. Discuss effect of substituents on basicity of aromatic amines.
- iv) Draw resonance structures of phenol and aniline.
- v) Define aromatic electrophilic substitution reaction. Explain mechanism of nitration and sulphonation of benzene.
- vi) Write methods of synthesis and reactions of cycloalkanes.
- vii) Give reason. Naphthalene undergoes electrophilic substitution reactions preferentially at  $\alpha$  position.
- viii) Give any two methods of preparation and reactions of benzoic acid.
- ix) Explain structure, synthesis and medicinal uses of Diphenylmethane.

-----END OF THE PAPER-----



**DR. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY, LONERE**

**End Semester Examination – Regular Winter 2023**

**Course : B. Pharmacy**

**Sem: III<sup>rd</sup>**

**Date: 04/01/2024**

**Subject Name : Physical Pharmaceutics-I**

**Subject Code :BP302T**

**Max Marks : 75**

**Duration : 3 Hr.**

**Instructions:**

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**

- a) State and explain the kinetic molecular theory of gas.
- b) Define solvation and association.
- c) State the classification of complexes.
- d) Define polymorphism with example.
- e) Define HLB and draw the scale.
- f) State the importance of Complexation in pharmacy.
- g) Define the term hypertonicity and hypotonicity
- h) Give Importance of protein binding.
- i) State electrometric method for determination of pH.
- j) Differentiate between Crystalline solid and amorphous solid.

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

- a) Define dissolution. Explain the different quantitative factors influencing the solubility of drugs.
- b) Enlist and explain different methods for the determination of surface tension.
- c) Define Liquefaction of gas. State the Principal and working of Faradays method, Lindes Method and Cloudes Method with suitable diagram.

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

- a) State and explain Fick's Law of Diffusion.
- b) Explain the method for determination of Critical Solution Temperature
- c) Enlist the components of aerosol and state the role of each component.
- d) Explain phase transition between solid, liquid and gas

- e) Write a short note on buffer capacity.
  - f) Enumerate different methods of analysis of complex. Explain pH titration method of analysis.
  - g) Elaborate different types of liquid crystals.
  - h) Define dielectric constant Write a note on its application in Pharmacy.
  - i) State and explain Nernst Distribution law along with its limitations.
-



**DR. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY, LONERE**  
**End Semester Examination – Winter 2023**

Date: 06.01.2024

Course: B. Pharmacy

Subject Name: Pharmaceutical Microbiology

Max Marks: 75

Sem: III

Subject Code-BP303T

Duration:

3 Hrs.

**Instructions:**

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) Draw a well labeled diagram of Laminar Air Flow equipment.
- ii) Differentiate between prokaryotic & eukaryotic cell.
- iii) List the methods used for evaluation of disinfectants.
- iv) Classify disinfectants.
- v) Define Microbiology. Enlist different branches of Microbiology.
- vi) List various types sterilization monitors.
- vii) Classify the viruses
- viii) Write the morphological classification of bacteria.
- ix) Classify staining techniques.
- x) Differentiate between bacteria and viruses

**Q. 2. Long Answers (Answer 2 out of 3)**

(2 x 10) = 20

- i) Discuss different methods used for measurement of bacterial growth.
- ii) Discuss main sources of contamination in aseptic area and methods of prevention.
- iii) Classify the methods of sterilization and explain heat related methods.

**Q. 3. Short Answers (Answer 7 out of 9)**

(7 x 5) = 35

- i) Define pure culture and explain methods used for isolation of pure culture.
- ii) Explain scope & importance of Microbiology related to Pharmaceutical field.
- iii) Explain bacterial growth curve.
- iv) Discuss methods used for microbiological assay of antibiotics.
- v) Explain designing of aseptic area.
- vi) Explain properties of fungi and add a note on classification of fungi
- vii) Explain in detail IMViC test.
- viii) Explain lytic cycle of bacteriophages in detail.
- ix) Enlist types of spoilage and explain factors affecting microbial spoilage.

-----END OF THE PAPER-----



**DR. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY, LONERE****Regular/Supplementary Winter Examination – 2023****Course: B. Pharmacy****Semester:III****Subject Name: Pharmaceutical Engineering****Subject Code: BP304T****Max Marks: 75****Date:09/01/2024****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

<b>Q.1.</b>	<b>Objective Type Questions (Answer All the Questions)</b>	<b>(10 X 2) = 20</b>
i)	What is the mechanism of size reduction?	
ii)	Give applications of filtration	
iii)	What is drying curve?	
iv)	Draw well labelled diagram of leaf filter	
v)	Define corrosion with example	
vi)	Give applications of centrifugation	
vii)	What is seive number?	
viii)	What is filter aid?	
ix)	What is heat exchanger?	
x)	Give applications of evaporation	
<b>Q.2.</b>	<b>Long Answers (Answer 2 out of 3)</b>	<b>(10 X 2) = 20</b>
i)	What do you mean by fluid flow, fluid statics and fluid dynamics? Differentiate between orifice meter and Venturimeter. Describe Venturimeter in detail	
ii)	Define distillation. Explain the principle and working of steam distillation	
iii)	Classify equipments used for mixing of semisolids. Describe the principle, construction and working of ribbon blender	
<b>Q.3.</b>	<b>Short Answers (Answer 7 out of 9)</b>	<b>(5 X 7) = 35</b>
i)	Explain the Reynold's experiment, give its significance.	
ii)	Explain principle, construction & working of Ball Mill	
iii)	Explain principle, construction and working of cyclone separator	
iv)	Explain principle, Construction, working & uses of planetary mixer.	
v)	Explain principle, Construction working of perforated basket centrifuge.	
vi)	Explain the principle of molecular distillation	
vii)	Explain principle, Construction, working & uses of fluidized bed dryer.	
viii)	Write a note on ferrous metal as material for plant construction.	

ix)	Differentiate between evaporation, distillation and drying explain the factors affecting evaporation
*** END OF THE PAPER ***	

The grid and the borders of the table will be hidden before final printing.