

B. Pharm. (CBCS Pattern) Semester-III
BP 301T - Pharmaceutical Organic Chemistry-II

P. Pages : 3

Time : Three Hours



GUG/W/24/10884

Max. Marks : 75

Notes : 1. All questions are compulsory.

1. Multiple Choice Questions.

20

- i) Picric Acid forms when phenol reacts with-----
 - a) Hydrogen
 - b) Nitric Acid
 - c) Sulphuric Acid
 - d) Formaldehyde
- ii) Enzyme responsible for hydrolysis of fats is-----
 - a) Reductase
 - b) Lipase
 - c) Kinase
 - d) Aconitase
- iii) Which of the following amines does not react with the acid chloride.
 - a) 1° amine
 - b) 2° amine
 - c) 3° amine
 - d) 4° amine
- iv) All carbons atoms in anthracene are-----
 - a) Sp hybridized
 - b) Sp² hybridized
 - c) Sp³ hybridized
 - d) None of these
- v) Hoffmann's degradation reaction is used for the synthesis of-----
 - a) 1° amine
 - b) 2° amine
 - c) 3° amine
 - d) None of these
- vi) Electron releasing group on aromatic amines-----
 - a) Decrease the basicity
 - b) Increase the basicity
 - c) Neutral the basicity
 - d) None of these
- vii) Phenanthrene is a fused polycyclic compound contains-
 - a) Three benzene ring
 - b) Four benzene ring
 - c) Two benzene ring
 - d) One benzene ring
- viii) Which of the following compound have highest ring strains?
 - a) Cyclopropane
 - b) Cyclobutane
 - c) Cyclomethane
 - d) Cyclopentane
- ix) Number of sigma bonds in a benzene is----
 - a) 2
 - b) 3
 - c) 4
 - d) 1

- x) Ortho-Para directing groups are-
- | | |
|--|---|
| a) $\text{NO}_2, \text{SO}_3\text{H}, \text{COOH}$ | b) $\text{CN}, \text{CHO}, \text{SO}_3\text{H}$ |
| c) $\text{OH}, \text{NH}_2, \text{CH}_3$ | d) None of these |
- xi) Benzene undergoes-----reaction.
- | | |
|-----------------|------------------|
| a) Substitution | b) Addition |
| c) Elimination | d) None of these |
- xii) Saponification is done by-----
- | | |
|--------------|-----------------|
| a) By Alkali | b) By Acid |
| c) By Salt | d) All of these |
- xiii) Huckel's Rule is also known as-----
- | | |
|------------------------|------------------|
| a) $(4n + 2)_5$ rule | b) $4n \pi$ rule |
| c) $(4n + 2)_\pi$ rule | d) None of these |
- xiv) Which catalyst is used during halogenation of benzene?
- | | |
|---------------|---------------|
| a) Lewis acid | b) Lewis base |
| c) Ni/pt | d) Platinum |
- xv) Electrophilic attack on Naphthalene occur at----
- | | |
|-----------------|-----------------|
| a) C_1 | b) C_2 |
| c) C_3 | d) C_4 |
- xvi) The electrophile which is consider to be active agent in nitration of benzene is-----
- | | |
|--------------------|---------------------|
| a) NO_2^- | b) NO^+ |
| c) NO_2^+ | d) HNO_2^+ |
- xvii) Identify the formula for cycloalkane.
- | | |
|---------------------------------|---------------------------------|
| a) $\text{C}_2\text{H}_{2n+2}$ | b) C_2H_{2n} |
| c) $\text{C}_n \text{H}_{2n+2}$ | d) $\text{C}_n \text{H}_{2n-2}$ |
- xviii) Which is fused cyclic aromatic compound-
- | | |
|-------------------|---------------------|
| a) Biphenyl | b) Diphenyl methane |
| c) Diphenyl amine | d) Naphthalene |
- xix) Dow's process is used for the preparation of
- | | |
|---------------|------------------|
| a) Amine | b) Phenol |
| c) Both a & b | d) None of these |
- xx) The carbon atoms in benzene ring are-
- | | |
|-----------------------------|-----------------------------|
| a) Sp hybridized | b) Sp^2 hybridized |
| c) Sp^3 hybridized | d) None of these |

- 2.** Solve **any two** questions. **20**
- a) Explain the electrophilic aromatic substitution reactions of Benzene.
 - b) Why phenol undergo electrophilic substitution reaction? Give various electrophilic substitution reaction of phenols.
 - c) Describe structure, synthesis, relation and uses of Naphthalene.
- 3.** Solve **any seven** questions. **35**
- a) Discuss the Kolbe's reaction.
 - b) Discuss the reactions of benzoic acid.
 - c) Explain the acid value & saponification value along with their significance.
 - d) Discuss the Hoffmann's Degradation reaction.
 - e) Explain resonance & Kekule's structure of benzene.
 - f) Write a note on Baeyer's strain theory of cycloalkane.
 - g) Write a note on iodine value.
 - h) Write structure and uses of-
 - a) DDT
 - b) Saccharin
 - c) BHC
 - i) Write structure and uses of-
 - a) Naphthol
 - b) Cresol
