

B. Pharm. CBCS Pattern Semester-II
BP 202T - Pharmaceutical Organic Chemistry-I

P. Pages : 3

Time : Three Hours



GUG/W/23/10879

Max. Marks : 75

Notes : 1. All questions are compulsory.

- 1.** 1) Isomers of a substance must have the same. **20**
- a) Structural formula b) Physical properties
c) Chemical properties d) Molecular formula
- 2) n-pentane and 2 methylbutane are a pair of
- a) Enantiomers b) Stereoisomers
c) Diastereomers d) Constitutional isomers
- 3) The number of structural isomers of C₆H₁₄ is
- a) 3 b) 4
c) 5 d) 6
- 4) A mixture of ethyl iodide and n-propyl iodide is subjected to wurtz reaction the hydrocarbon which will not be formed is
- a) pentane b) Propane
c) Hexane d) Butane
- 5) Hydrocarbon which is liquid at room temperature
- a) Pentane b) Ethane
c) Butane d) Propane
- 6) Due to presence of double bonds, alkenes are
- a) Saturated b) Unsaturated
c) Polar d) Non-polar
- 7) Formula of ethene is
- a) C₂H₆ b) CH₃
c) C₄H₁₂ d) C₂H
- 8) Which of the following is a conjugated diene
- a) CH₃ - CH = CH - CH = CH₂ b) CH₂ = CH - CH₂ - CH = CH₂
c) CH₂ = C = CH₂ d) CH₂ = C = CH - CH₃
- 9) Which of the following is a primary halide?
- a) Neohexyl chloride b) Isopropyl iodide
c) Sec-butyl iodide d) Ter-butyl iodide
- 10) Which of the following is a vinyl halide?
- a) 1-Bromocyclohexane b) Chloroethane
c) I-Chloro-*o*-phenyl propane d) All of the above

- 11) SN^1 reaction occur through the intermediate formation of
- Carbanions
 - Carbocation
 - Free radicals
 - None of these
- 12) Which of the following is most soluble in water.
- Sec-butyl alcohol
 - tert-butyl alcohol
 - n-butyl alcohol
 - Isobutyl alcohol
- 13) The compound which does't react with lucas reagent?
- Z° - butyl alcohol
 - 3° butyl alcohol
 - n-butyl alcohol
 - Isobutyl alcohol
- 14) Cross Cannizaro reaction is given by
- $\text{C}_6\text{H}_5 - \text{HO}, \text{HCHO}$
 - $\text{C}_6\text{H}_5 - \text{CHO}, \text{CH}_3\text{CHO}$
 - $\text{CH}_3\text{CHO}, \text{HCHO}$
 - All of the above
- 15) During Reduction of carbonyl compound by hydrazine and KOH, The first intermediate formed is.
- $\text{RCH} = \text{NH}$
 - RCONH_2
 - $\text{RC} = \text{N}$
 - $\text{RCH} = \text{NNH}_2$
- 16) In which type of reaction cyanohydrin formed from acetone?
- Nucleophilic substitution
 - Electrophilic substitution
 - Nucleophilic addition
 - Electrophilic addition
- 17) The correct order of decreasing acid strength of trichloroacetic acid (A) trifluoroacetic acid (B) acetic acid (C) and formic acid (D) is
- $\text{B} > \text{A} > \text{D} > \text{C}$
 - $\text{A} > \text{C} > \text{B} > \text{D}$
 - $\text{A} > \text{B} > \text{C} > \text{D}$
 - $\text{B} > \text{D} > \text{C} > \text{A}$
- 18) Which reagent will bring about the conversion of carboxylic acid into ester.
- $\text{C}_2\text{H}_5\text{OH}$
 - Dry $\text{HCl} + \text{C}_2\text{H}_5\text{OH}$
 - $\text{Al}(\text{OC}_2\text{H}_5)_3$
 - LiAlH_4
- 19) Which of the following is not primary amines?
- Isobutylamine
 - Sec-butylamine
 - tert-butylamine
 - Dimethylamine
- 20) Gabriel phthalimide reaction is used for synthesis of
- 3° amino
 - 1° aromatic amines
 - 2° amine
 - 1° aliphatic amines

2. Solve any seven.

7x5
=35

- Explain the effect of substituents on acidity of carboxylic acid.
- What is hybridization? Write a note on SP_3 hybridization in alkanes.
- What are aliphatic amines? Explain any three chemical reaction of aliphatic amines
- Discuss the mechanism and stereochemistry of SN_2 reaction.

- 5) Explain the reaction and mechanism of Benzoin condensation reaction.
- 6) Give any four methods of preparations of alkenes.
- 7) What is Isomerism? Discuss structural Isomerism with examples.
- 8) Discuss the mechanism and stereochemistry of S_N1 reaction.
- 9) How do you distinguish primary secondary and tertiary Alcohols by chemical test.

3. Solve any two.

**10x2
=20**

- 1) Explain the reaction and mechanism of Perkin condensation and Aldol condensation.
- 2) What are elimination reactions? Discuss the kinetics, mechanism, orientation and reactivity of E_2 reaction.
- 3) a) Give any three method of preparation of alkane.
b) Explain mechanism of halogenation of alkane.
