D.A.V. PUBLIC SCHOOL, NEW PANVEL



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Std- XII / Sec.:

Worksheet :1

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- 1. Chlorobenzene on reaction with NaOH at 300K followed by acidic
 - hydrolysis produces

Subject: Chemistry

(a) Phenol

- (b) Sodium phenoxide
- (c) Benzaldehyde
- (d) Benzoic acid
- 2. p-dichlorobenzene has higher melting point than its o- and m- isomers. Why?
 - (a) m- dichlorobenzene is more polar than o-isomer
 - (b) p-isomer has a symmetrical crystalline structure
 - (c) boiling point of o- isomer is more than p-isomers
 - (d) All of these are correct

3. Which of the following is most reactive towards aqueous NaOH?

- (a) C_6H_5CI (b) $C_6H_5CH_2CI$ (c) C_6H_5Br (d) BrC_6H_4Br
- 4. Which of the following haloalkanes is optically active?
 - (a) 1-Chloropropane (b) 1-Bromopropane
 - (c) 1-lodopropane (d) 1-Fluoropropane
- 5. **Assertion :** Exposure of ultraviolet rays to human causes the skin cancer, disorder and disrupt the immune system.

Reason : Carbon tetrachloride is released into air it rises to atmosphere and deplets the ozone layer.

- 6. What is the nature of C—X bond in haoalkanes?
- 7. Aryl halides cannot be prepared by the action of sodium halide in the presence of

 H_2SO_4 . Why?

- 8. What are enantiomers?
- 9. What is meant by chiral carbon atom?
- 10. Explain why thionyl chloride method is preferred for preparing alkyl chlorides from alcohols?
- 11. The main difference between C X bond of a haloalkane and a haloarene is
 - (a) C X bond in haloalkanes is shorter than haloarenes
 - (b) In haloalkanes the C attached to halogen in C − X bond is sp³ hybridised while in haloarenes it is sp² hybridised.
 - (c) C X bond in haloalkanes acquires a double bond character due to higher electronegativity of X than haloarenes.
 - (d) haloalkanes are less reactive than haloarenes due to difficulty in C X cleavage in haloalkanes.

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Worksheet :2

1. A zero order reaction is one whose rate is independent of

- (a) the concentration of the reactants
- (b) the temperature of reaction
- (c) the concentration of the product
- (d) the material of the vessel in which reaction is carried out
- 2. A catalyst increases the reaction rate by:
 - (a) decreasing enthalpy
 - (b) increasing internal energy
 - (c) decreasing activation enthalpy
 - (d) increasing activation enthalpy
- 3. Consider the reaction A —> B. The concentration of both the reactants and the products varies exponentially with time. Which of the following figures correctly describes the change in concentration of reactants and products with time?



- 4. A first order reaction takes 40 min for 30% decomposition. t_{1/2} will be(a) 77.7 min(b) 52.5 min(c) 46.2 min(d) 22.7 min
- 5. In a reaction, the threshold energy is equal to
 - (a) activation energy + normal energy of reactants
 - (b) activation energy normal energy of reactants
 - (c) normal energy of reactants activation energy
 - (d) average kinetic energy of molecules of reactants
- 6. Which of the following influences the reaction rate performed in a solution?
 - (a) Temperature (b) Activation energy
 - (c) Catalyst (d) All of the above
- 7. What is the effect of temperature on the rate constant of a reaction? How can this temperature effect on the rate constant be represented quantitatively?
- 8. A first order reaction has a rate constant 1.15 x 10 ⁻³ S⁻¹. How long will 5 g of this reactant take to reduce to 3 g?