

**Class : 11**

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**SECOND MID TERM TEST - 2024**

Time Allowed : 1.30 Hours]

**CHEMISTRY**

[Max. Marks : 50

**PART - A**

1. Answer all the questions.

10x1=10

1. Sodium is stored in -----

- a) Alcohol                      b) Water                      c) Kerosene                      d) None of these

2. Which one of the following binary liquid mixtures exhibits positive deviation from Raoult's law?

- a) Acetone + chloroform                      b) Water + nitric acid  
c) HCl + water                      d) ethanol + water

3. Which among the following alkenes on reductive ozonolysis produces only propane?

- a) 2 - Methyl propene                      b) 2 - Methyl but - 2 - ene  
c) 2, 3 - Dimethyl but - 1 - ene                      d) 2, 3 - Dimethyl but - 2 - ene

4. Which of the following is not an alkaline earth metal?

- a) Calcium                      b) Rubidium                      c) Magnesium                      d) Barium

5. Assertion : Generally alkali and alkaline earth metals form superoxides

Reason : There is a single bond between O and O in superoxides.

- a) both assertion and reason are true and reason is the correct explanation of assertion  
b) both assertion and reason are true but reason is not the correct explanation of assertion  
c) assertion is true but reason is false  
d) both assertion and reason are false

6. Which of the following can be used as the halide component for Friedel - Crafts reaction?

- a) Chloro benzene    b) Bromo benzene    c) chloro ethane    d) isopropyl chloride

7. Alkynes can be reduced to cis alkenes using ----- catalyst.

- a) Ni                      b) Lindlar's  
c) Fe                      d) sodium in liquid ammonia

8. For NaCl the theoretical molar mass is 58.5 and experimental molar mass is 38.75 then van't-Hoff factor (i) is

- a) 0                      b) 1                      c) 1.50                      d) 2.5

9. Which one of the following gases has the highest value of Henry's law constant?

- a) N<sub>2</sub>                      b) He                      c) CO<sub>2</sub>                      d) H<sub>2</sub>

10. Which of the following has highest hydration energy?

- a) MgCl<sub>2</sub>                      b) CaCl<sub>2</sub>                      c) BaCl<sub>2</sub>                      d) SrCl<sub>2</sub>

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## PART - II

5X2=10

- II. Answer any 5 questions. Question number 17 is compulsory.
11. Why gypsum is referred to as 'desert rose'?
  12. How will you identify the unsaturated hydrocarbons?
  13. Define the term 'isotonic solution'.
  14. Find the molality of the solution containing 45 g of glucose dissolved in 2 kg of water.
  15. Write note on anomalous nature of Lithium.
  16. What is osmosis?
  17. Draw the structural formula for 4,5 - diethyl - 3,4,5 - trimethyl octane.

## PART - III

- III. Answer any Five Questions. (Question No. 24 is compulsory) 5x3=15
18. What is meant by colligative property? Name them.
  19. Differentiate ideal and non-ideal solutions.
  20. Write Dow's process.
  21. How will you prepare BHC? Write its use?
  22. Discuss briefly about the similarities between Be and Al.
  23. Explain Markovnikov's rule with an example.
  24. 0.24 g of a gas dissolves in 1 L of water at 1.5 atm pressure. Calculate the amount of dissolved gas when the pressure is raised to 6 atm at constant temperature.

## PART - IV

- IV. Answer the following questions. 3x5=15
25. a) State Henry's law and explain its limitations.  
(OR)  
b) Explain the structural elucidation of Benzene.
  26. a) i) Discuss the similarities between beryllium and aluminium. (3)  
ii) Write Birch reduction (2)  
(OR)  
b) i) How will you prepare Lindane? Write its use? (3)  
ii) State Raoult's law (2)
  27. a) Write the following reactions.  
i) Friedel Craft's acetylation (3)  
ii) Wurtz reaction (2)  
(OR)  
b) i) How is plaster of paris prepared? Write its uses. (3)  
ii) Write Huckel's rule (2)

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