

V11C

Virudhunagar District
Common Second Mid Term Test - 2023

Standard 11 CHEMISTRY

Time: 1.30 Hrs.

Marks: 50

PART - I

I. Choose the correct answer for all the questions:

10×1=10

- 1) Lithium shows diagonal relationship with
 - a) Sodium
 - b) Magnesium
 - c) Calcium
 - d) Aluminium
- 2) The formula of Gypsum is
 - a) $\text{CaSO}_4 \cdot 2\text{H}_2\text{O}$
 - b) $\text{CaSO}_4 \cdot \frac{1}{2}\text{H}_2\text{O}$
 - c) $3\text{CaSO}_4 \cdot \text{H}_2\text{O}$
 - d) $2\text{CaSO}_4 \cdot 2\text{H}_2\text{O}$
- 3) Colour given by the Barium in the bunsen flame is
 - a) Crimson red
 - b) Apple green
 - c) Brick red
 - d) Violet colour
- 4) Osmotic pressure (π) of a solution is given by the relation
 - a) $\pi = nRT$
 - b) $\pi v = nRT$
 - c) $\pi RT = n$
 - d) None of these
- 5) The Van't Hoff factor (i) for a dilute aqueous solution of the strong electrolyte barium hydroxide is
 - a) 0
 - b) 1
 - c) 2
 - d) 3
- 6) Which one of the following is incorrect for ideal solution?
 - a) $\Delta_{H \text{ mixing}} = 0$
 - b) $\Delta_{U \text{ mixing}} = 0$
 - c) $\Delta_P = P_{\text{observed}} - P_{\text{calculated}} = 0$
 - d) $\Delta_{G \text{ mixing}} = 0$
- 7) Which of the following compounds will not undergo Friedal - Crafts reaction easily?
 - a) Nitrobenzene
 - b) Toluene
 - c) Cumene
 - d) Xylene
- 8) Huckel's rule is
 - a) $(4n+1) \pi e^-$
 - b) $(4n+2) \pi e^-$
 - c) $(4n-2) \pi e^-$
 - d) $(4n-1) \pi e^-$
- 9) IUPAC name of $\text{CH}_3 - \text{CH} - \text{CH}_2 - \text{CH}_2 - \text{CH}_3$ is

$$\begin{array}{c} | \\ \text{CH}_3 \end{array}$$

 - a) 3-methyl pentane
 - b) 4-methyl pentane
 - c) 2-methyl pentane
 - d) 2-methyl butane
- 10) The general formula for cyclo alkanes
 - a) C_nH_n
 - b) C_nH_{2n}
 - c) $\text{C}_n\text{H}_{2n-2}$
 - d) $\text{C}_n\text{H}_{2n+2}$

PART - II

II. Answer ANY FIVE questions and Question No. 17 is compulsory: 5×2=10

- 11) What are the uses of Plaster of Paris?
- 12) What happens when sodium carbonate is heated?
- 13) Why alkali metals impart colour in busen flame?
- 14) State Raoult's law.
- 15) What are isotonic solutions?
- 16) Define Van't Hoff factor.

Kindly Send me your Answer Keys to email id - Padasalai.net@gmail.com

V11C

- 17) The depression in freezing point for a particular solution is 0.093°C . The molal depression constant is $1.86 \text{ K Kg mol}^{-1}$. Calculate the concentration of the solution in molality.
- 18) Define Markovnikoff's Rule.

PART - III**III. Answer ANY FIVE questions and Question No. 22 is compulsory: $5 \times 3 = 15$**

- 19) Write Wurtz reaction.
- 20) Explain Ozonolysis.
- 21) What are the uses of sodium bicarbonate?
- 22) Why sodium hydroxide is much more water soluble than sodium chloride?
- 23) What are ideal and non-ideal solutions? Give examples.
- 24) Define: (i) Molarity (ii) Mole fraction
- 25) Define osmotic pressure.
- 26) How Beryllium and Aluminium are diagonally related?

PART - IV**IV. Answer all questions:** **$3 \times 5 = 15$**

- 27) a) Explain Castner - Kelner process of preparing sodium hydroxide.

(OR)

- b) How Beryllium differ from other elements of its own family?

- 28) a) State Henry's law. Write the limitations of Henry's law.

(OR)

- b) i) What are Colligative properties?

- ii) Define Normality and Molality.

- 29) a) Explain the following reactions:

- (i) Friedel craft's reaction (ii) Wurtz-Fittig reaction

(OR)

- b) i) Write the Nitration of benzene.

- ii) What are the uses of Alkynes?