

SECOND MIDTERM TEST NOVEMBER – 2024

Std: 11

CHEMISTRY

MAXIMUM MARKS: 35

TIME: 1.30Hrs

PART – I

[10 × 1 = 10]

ANSWER ALL THE QUESTIONS.

- Among the following the least thermally stable is
 (a) K_2CO_3 b) Na_2CO_3 (c) $BaCO_3$ d) Li_2CO_3
- RbO_2 is
 a) superoxide and paramagnetic b) peroxide and diamagnetic
 c) superoxide and diamagnetic d) peroxide and paramagnetic
- The colour of Bunsen flame shown by Strontium on heating is
 a) Brick Red b) Apple Green c) Crimson Red d) Yellow
- According to Raoult's law, the relative lowering of vapour pressure for a solution is equal to
 a) mole fraction of solvent b) mole fraction of solute
 c) number of moles of solute d) number of moles of solvent
- 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
- The C – H bond and C – C bond in ethane is formed by which of the following types of overlap
 a) $sp^3 - s$ and $sp^3 - sp^3$ b) $sp^2 - s$ and $sp^2 - sp^2$ c) $sp - sp$ and $sp - sp$ d) $p - s$ and $p - p$
- Identify the compound 'Z' in the following reaction

$$C_2H_6O \xrightarrow[623K]{Al_2O_3} X \xrightarrow{O_3} Y \xrightarrow{Zn / H_2O} Z$$
 a) Formaldehyde b) Acetaldehyde c) Formic acid d) none of these
- The desirable p^H limit of drinking water is a) 6.5 to 7.5 b) 6.5 to 8.5 c) 5.6 to 6.5 d) 4.6 to 7.5
- Which one of the following gas forms 'Acid Rain' a) CFC b) CO_2 c) SO_2 d) CO
- The Ozone depletion will cause a) forest fires b) eutrophication c) bio magnification d) global warming

PART – II

[3 × 2 = 6]

ANSWER ANY THREE QUESTIONS. Q. No 16 is compulsory.

- Give the uses of gypsum.
- Give the systematic names for the following (a) lime (b) washing soda (c) Caustic potash (d) lye
- What happens when ethylene is passed through cold dilute alkaline potassium permanganate. Write down the equation.
- Which is considered to be earth's protective umbrella? Why?
- Define Viable and non-viable particulate pollutants.
- 3.15 g of oxalic acid dihydrate, is dissolved in water and the solution was made up to 100 mL using a standard flask. Calculate the normality of the solution.

PART – III

[3 × 3 = 9]

ANSWER ANY THREE QUESTIONS. Q. No 22 is compulsory.

- Tabulate the similarities between beryllium and aluminium.
- Define reverse osmosis.
- State Henry's law.
- Differentiate classical smog from photochemical smog.
- How will you prepare benzene from phenol?
- $CH_3-CH_2-CH_2-Br \xrightarrow[KOH]{Alcoholic} X$. Identify 'X'.

PART – IV

[2 × 5 = 10]

ANSWER ALL THE QUESTIONS.

- a) (i) How is plaster of Paris prepared? Mention its uses. (3)
 (ii) Write the reaction between Milk of lime and Chlorine. (2) (OR)
- (i) Define elevation of boiling point. Derive the equation for the determination of molar mass of solute from elevation of boiling point. (5)
 (ii) (OR)
- a) Explain the structure of Benzene. (Any Five Points) (5) (OR)
 b) (i) Define Green House effect. (2)
 (ii) Mention any three harmful effects of Acid Rain. (3)

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