



MODEL PAPER, 2023

Subject: Chemistry

Grade-X

M. Marks: 60

Time: 3 Hours

SECTION "A"

(MULTIPLE CHOICE QUESTIONS)

Q1. Choose the correct answer for each from the given options. Each question carries one mark. (12)

(i) The unit of KC for reaction $N_2 + O_2 \rightleftharpoons 2NO$:

- (a) Mol/dm^3 (b) $\text{Mol}^{-2}/\text{dm}^6$ (c) No unit

(ii) Salt among following is:

- (a) HCl (b) KCl (c) HNO₃

(iii) Substances that react with both acids and bases are called:

- (a) Conjugate bases (b) Amphoteric substance (c) Buffers

(iv) $\text{CH}_3 - \text{CH}_2$ is _____ radical.

- (a) Methyl (b) Ethyl (c) Iso-propyl

(v) The general formula of alkene is:

- (a) $\text{C}_n\text{H}_{2n+2}$ (b) C_nH_{2n} (c) $\text{C}_n\text{H}_{2n-2}$

(vi) Lactose is:

- (a) Milk sugar (b) Honey sugar (c) Cane sugar

(vii) Glucose is:

- (a) Vitamin (b) Carbohydrates (c) Protein

(viii) Amino acids are building block of:

- (a) Vitamin (b) Proteins (c) Lipid

(ix) Ozone is gas found in the _____ layer:

- (a) Troposphere (b) Mesosphere (c) Stratosphere

(x) Layer of atmosphere which separates stratosphere and troposphere is known as:

- (a) Tropo pause (b) Mesopause (c) Thermopause

(xi) How much fresh water is present on earth:

Q13. Define the following terms:

- (i) Titration (ii) Soft water (iii) Analytical Chemistry

Q14. Write any three significance uses of carbohydrates OR proteins or lipids.

SECTION "C"

(DESCRIPTIVE ANSWER QUESTIONS)

Note: Answer any four (04) questions from this section. Each question carries 6 marks. (24)

Q15. State law of Mass action. Derive an expression for equilibrium constant.

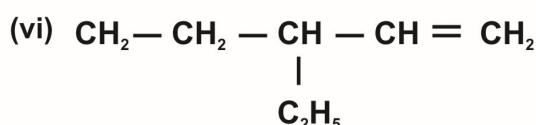
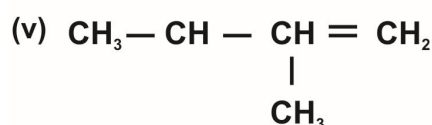
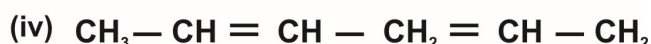
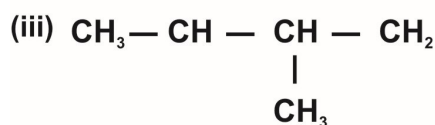
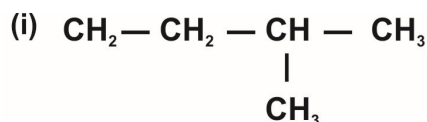
Q16. Describe vitamins and types of vitamins OR differentiate between stratosphere and troposphere?

Q17. What is Ozone? How does ozone depletion occur by chlorofluorocarbons also maintain some adverse impact on it. OR describe global warming.

Q18. Differentiate between soft and hard water, describe the different methods of removing temporary and permanent hardness.

Q19. Describe the process of saponification with the help of flow sheet diagram.

Q20. Give I.U.P.A.C name of the following compound.



OR

Describe gas chromatography, also write two uses of Gas chromatography.