

(SECTION - II)

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| 5. | (a) | Write a note on Limiting reactant. Explain it giving at least two examples. | 4 |
| | (b) | Write four important properties of Metallic solids. | 4 |
| 6. | (a) | 250 cm ³ of hydrogen is cooled from 127°C to -27°C by maintaining the pressure constant. Calculate the new volume of gas at low temperature. | 4 |
| | (b) | Write down any four properties of positive rays. | 4 |
| 7. | (a) | Explain postulates of molecular orbital theory. | 4 |
| | (b) | Derive the relationship between ΔH and ΔE , where H stands for enthalpy and E stands for internal energy. Which are two conditions when ΔH and ΔE becomes equal. | 4 |
| 8. | (a) | Ca(OH) ₂ is a sparingly soluble compound. Its solubility product is 6.5×10^{-6} . Calculate the solubility of Ca(OH) ₂ . | 4 |
| | (b) | Describe any four physical methods for the determination of the rate of a chemical reaction. | 4 |
| 9. | (a) | Give graphical explanation for Elevation of boiling point of a solution. | 4 |
| | (b) | Explain four Industrial applications of Electrolysis. | 4 |

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