**CLASS : XI SUBJECT : CHEMISTRY**

**CHAPTER: Thermodynamics**

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| **Sr. No.** | **Knowledge Based** | **Marks** |
| 1 | What is the basis of Hess’s Law of heat summation? |  |
| 2 | Can enthalpy of combustion be positive? |  |
| 3 | Define the terms:   1. State function 2. Path functions 3. Adiabatic 4. Open system 5. Closed system 6. Internal energy 7. Enthalpy 8. Hess’s law 9. System 10. Surroundings |  |
| 4 | Differentiate between extensive and intensive properties. |  |
| **S. No.** | **Understanding Based** |  |
| 5 | Diamond is an elementary substance yet its standard heat of formation is not taken as zero. Why? |  |
| 6 | What is the value of delta G at melting point of ice? |  |
| 7 | For a reaction both ΔH and ΔS are positive. Under what conditions, will the reaction occur spontaneously? |  |
| 8 | Is ΔH always greater than ΔU. Explain why or why not? |  |
| 9 | Neither q nor w is a state function but q+w is a state function. Why? |  |
| **S. No.** | **Application** |  |
| 10 | One kg of graphite is burnt in a closed vessel. The same amount is burnt in an open vessel. Will the heat evolved in two cases be same or different? |  |
| 11. | What is the value of entropy at equilibrium? |  |
| 12 | Entropy of a substance is taken as zero at absolute zero temperature . comment. |  |
|  | **HOTS** |  |
| 13 | Is the entropy of universe constant? |  |