

CHEMISTRY CHAPTER 7

(Thermochemistry)

Short Questions:

1. What is thermochemical equation? Give two examples.
2. What is thermochemical equation? What information does it convey?
3. What are thermochemical reactions? Give their types.
4. Why it is necessary to mention the physical states of reactants and products in the thermochemical equation?
5. Burning of candle is spontaneous process. Justify it.
6. Differentiate between endothermic and exothermic reactions.
7. What are endothermic and exothermic reactions? Give examples.
8. What is internal energy of a system?
9. Differentiate between Law of conservation of energy and Hess's Law.
10. Explain the term enthalpy of atomization.
11. Define enthalpy of solution. Give an example.
12. Define Enthalpy of solution and enthalpy of neutralization.
13. Define enthalpy of neutralization with an example.
14. Define standard enthalpy of formation and give two examples.
15. What is state function? Give two examples.
16. State the Hess's Law of constant heat summation.
17. Is it true that ΔH and ΔE have the same values for the reaction taking place in solution state?
18. Draw a labeled diagram of Bomb Calorimeter.
19. What is spontaneous process? Give two examples.
20. Prove that $\Delta E = q_v$
21. Why heat energy is released in exothermic reactions?
22. Why the work done by the system is taken as negative?

Long Questions:

1. Define Enthalpy and prove that $\Delta H = q_p$
2. State and explain with an example the Hess's law of constant heat summation.
3. Define and explain Hess's law and give its applications.
4. State Hess's Law. Explain it by giving two examples.
5. State 1st law of thermodynamics. Prove that $\Delta E = q_v$
6. State 1st law of thermodynamics. How does it explain that $\Delta H = q_p$?
7. Define Enthalpy of reaction. How is it measured by Glass Calorimeter?
8. Define with examples System, Surrounding, Non-spontaneous reactions, endothermic reactions.
9. What is molar heat of combustion? How is it measured by bomb calorimeter?