Chemistry

Volume 1(unit7-2marks and 3marks)

1. State first law, second law and third law of thermodynamics.

2.Define hess law of constant heat summation.

3. Explain intensive properties with two examples.

4. Define Gibbs free energy.

5. Define enthalpy of combustion.

6. Define molar heat capacity. Give its unit.

7.Define the calorific value of food. What is the unit of calorific value.

8.Define enthalpy of neutralization.

9. What is lattice energy.

10. What are state and path functions. Give two examples.

11. Define isothermal, adiabatic, isobaric and isochoric process.

12. List the characteristics of internal energy.

13. List the characteristics of gibbs free energy. (5marks)

14. Write down the Born - Haber cycle for the formation of $CaCl_2$.

15.State the various statements of second law of thermodynamics.

16.What are spontaneous reactions? What are the conditions for the spontaneity of a process.

17.Explain how heat absorbed at constant volume is measured using bomb calorimeter with a neat diagram.

18.calculate the work involved in expansion and compression process.

19.Derive the relation between change in enthalpy and change in internal energy for an ideal gas. Explain each term involved in the equation.

20.Suggest and explain an indirect method to calculate lattice enthalpy of sodium chloride crystal.