

Gurudas College  
Department of Chemistry  
Internal Assessment 2020  
SEM-III  
Paper CC-3-5

Date-03.03.2021

F.M.- 10

Answer any ten questions.

(1x10=10)

1. What do you mean by intensive property of a system? Give an example.
2. What is enthalpy of combustion of a substance?
3. No work can be obtained by operating the engine under isothermal condition-----explain.
4. What are auxiliary state functions?
5. Write down the criteria for spontaneity and equilibrium.
6. How  $K_x$  is related to  $K_p$  and  $K_c$ .
7. Write down the relation between equilibrium constant and standard Gibbs free energy change of a chemical equation.
8. Write down the mathematical form of van't Hoff reaction isobar and isochore.
9. Draw the conductometric titration curve of precipitation titration between KCl and  $\text{AgNO}_3$  where KCl is added as titrant (added dropwise from burette).
10. Write the unit of equivalent conductance.
11. Sketch how equivalent conductance of weak electrolyte varies with concentration of the electrolyte.
12. Write down the equation that gives pH of an acid buffer.
13. Give the name of an acid-base indicator suitable for titrating a weak base with a strong acid.
14. Define buffer capacity.
15. Write down the cell reaction in standard glass calomel electrode.