

SOVARANI MEMORIAL COLLEGE
B.Sc (Chemistry Hons) Examination 2021
Sem - I (Hons)

Paper - 1 (CC-1-1 TH)

Internal Assessment

F.M - 10, Time - 30 mins

Answer any 10 questions

Each question carry 1 mark

1. State Pauli exclusion principle.
2. Calculate the ground state term symbol for hydrogen atom.
3. Show the rough shape of the radial distribution function for the 1s orbital of hydrogen.
4. Identify the Lewis acid in the following reaction
$$\text{FeCl}_3 + \text{Cl}^- \rightarrow [\text{FeCl}_4]^-$$
5. HSO_3^- may be considered both as an acid and a base - comment
6. Balance the equation by ion-electron method
$$\text{Mn}^{2+} + \text{BiO}_3^- + \text{H}^+ \rightarrow \text{MnO}_4^- + \text{Bi}^{3+} + \text{H}_2\text{O}$$
7. Define disproportionation reaction with an example.
8. Arrange in order of increasing acidity of the following hybrid orbitals
 sp, sp^2, sp^3
9. Give one example of homolytic bond fission.
10. Give an example of addition reaction.
11. Give an example of an electrophile.
12. Give an example of a nucleophile.