U.G. 4th Semester Examination - 2020

CHEMISTRY

[HONOURS]

Course Code : CHEM(H)CC-P-8

[PRACTICAL]

Full Marks : 20 Time : Hours

The figures in the right-hand margin indicate marks.

Answer any **four** questions: 5×4=20

1. a) What is formal potential?

   b) How it is determined for Fe^{2+}/Fe^{3+} system during Potentiometric titration of Mohr's salt solution? 2+3

2. a) What is Salt Bridge? What is its application?

   b) What is the nature of the plot in Potentiometric titration of $AgNO_3$ solution with KCl ? 3+2

3. a) What is meant by Critical Solution Temperature?

   b) Discuss about the Phenol Water system phase diagram mentioning degrees of freedoms. 2+3

4. a) Write down the principle of measurement of K_{sp} of AgCl Potentiometrically.

   b) What are the advantages of Potentiometric titration? 3+2

5. Write down the expression of solubility of a sparingly soluble salt AgX (X = Halide) in pure water, in a solution that contains a common ion and in a neutral electrolyte. 5

6. a) How the strength of a dibasic acid can be determined using pH metric titration method? Why derivative plots are utilized?

   b) What type of electrochemical cell is utilized in a pH meter to measure the pH of a solution ? 3+2

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