2025

First Semester

Basic Analytical Chemistry

Paper- Chemistry (SEC)

Paper Code-SEC0116903N

Time: 1 hour 30 minutes Full marks-30

(The figures in the margin indicate the full marks for the questions)

1. Answer the following questions 1×5=5

(a) The pH range of methyl blue indicator is:
(i) 2 – 4 (ii) 4 – 5 (iii) 6 – 7 (iv) 8 – 10

(b) In the determination of water hardness by EDTA titration, the commonly used indicator is:
(i) Phenolphthalein (ii) Methyl orange (iii) Eriochrome Black-T (EBT) (iv) Starch

(c) The most commonly used reagent in complexometric titration is:
(i) NaOH (ii) EDTA (iii) Phenolphthalein (iv) HCl

(d) Alizarin changes colour from:
(i) Blue to yellow (ii) Violet to red (iii) Red to yellow (iv) Blue to red

(e) Water pollution can be caused by:
(i) Only natural activities (ii) Only man-made activities (iii) Both natural and man-made activities (iv) Neither natural nor man-made activities

2. Answer the following questions (any five). 2×5=10

(a) Name two indicators used in complexometric titration.
(b) Name two vitamins that are water soluble.
(c) Write the importance of chromatography.
(d) What are the two chief sources of water pollution?
(e) What do you mean by Accuracy and Precision?
(f) What do you mean by pure water?
(g) What do you mean by significant figure? Give example.

3. Answer the following questions (any three). 5×3=15

(a) Write about interdisciplinary nature of Analytical Chemistry.
(b) Discuss the concept of soil pH and pH measurement.
(c) Write short notes on Proteins.
(d) What is water pollution? Write any three causes of water pollution.
(e) Write the steps involved in paper chromatography.
(f) Write the procedure for measuring pH of soil.

****