

Sr. No. of Question Paper: **4735**
Unique Paper Code: 2176000003
Name of the Paper: (SEC) Lab Testing and Quality Assurance
Name of the Course: B.Sc. (Hons)/ B.Sc. (Prog) / All undergraduate courses
Semester : II/ IV
Duration: 1 Hour
Maximum Marks: 30

Instructions for candidates

- a) Write your Roll No. on the top immediately upon receipt of this question paper.
- b) Attempt any two questions.
- c) All questions carry equal marks

Q1.

- a) Define R_f value. What is its significance?
 - b) Explain briefly complexometric titration with examples.
 - c) Why do samples often need pre-treatment before analysis?
- (5,5,5)

Q2.

- a) Discuss the Quality control chemist's responsibilities and duties.
 - b) Discuss the procedure of calibration of the burette.
 - c) Discuss the standards for manufacturing in life sciences.
- (5,5,5)

Q3.

- a) Discuss the principle and procedure involved in paper chromatography.
 - b) Distinguish between
 - (i) the equivalence point and the end point of a titration,
 - (ii) a primary standard and a secondary standard.
 - c) Write chemical formulas for the following
 - i. EDTA
 - ii. Potassium dichromate
 - iii. Potassium permanganate
 - iv. Mohr salt
 - v. Oxalic acid
- (5,5,5)

Q4.

- a) What is Calibration? What are the benefits of Measuring Instrument Calibration?
 - b) What is Quality Control (QC)? And what are the key aspects of QC?
 - c) Write a short note on
 - I. Lambert Beer's law
 - II. Preservation and storage of the sample
- (5,5,5)