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Total No. of Pages : 01

Total No. of Questions : 08

M.Sc. (Ph.Chem.) (Sem.-1)
ANALYTICAL TECHNIQUES – I
Subject Code : MSPC-103
Paper ID : [E0267]

Time : 3 Hrs.

Max. Marks : 80

INSTRUCTIONS TO CANDIDATES :

1. Attempt any FIVE questions out of EIGHT questions.
2. Each question carries SIXTEEN marks.

1. (a) Explain the concept of error, precision and accuracy. (8)
(b) Explain the effect of pH and temperature on the solubility of precipitates. (8)
2. Discuss in general-the calibration of analytical equipments. How will you calibrate HPLC? (10,6)
3. Write an elaborative note on the principles of complexometric titrations and methods using EDTA. (16)
4. Draw a block diagram of GC. Write an elaborative note on various detectors used with GC. (4,12)
5. What is gravimetric analysis? Explain various methods of gravimetric analysis. (16)
6. (a) Define common ion effect, primary standards, co-precipitation and chelating agent with example (8)
(b) Explain the titrations with perchloric acid and their significance. (8)
7. Write a detailed note on indicators. What are the various factors that govern the selection of an indicator? (16)
8. Write a note on :
 - a) Iodi- and Iodo-metric titrations (8)
 - b) Ion-exchange chromatography (8)