

BIRLA INSTITUTE OF TECHNOLOGY & SCIENCE

Pilani-333031. Rajasthan

First Semester 2022-2023

Mid-Semester Examination (Closed Book)

Course Name: Modern Pharmaceutical Analytical Techniques

Course No: PHA G540

Marks: 30

Time: 90 Min

Note: Answer for all questions precisely

1) a) How will you prepare the given sample of tobramycin ointment for appropriate analysis and estimate the content of the same by relative analytical method? **(4x3 = 12)**

b) Explain about common methods of calibration in any instrumental analysis.

c) Write the strategies available for measuring an analyte concentration in the presence of interferents in the given sample.

d) Enumerate the significance of membranes in sample preparation and analysis.

2) a) Write a brief account on horizontal developmental chambers in chromatography. **(3x3=9)**

b) Write a note on medium pressure bio-chromatography.

c) Comment on HILIC and OPLC.

3) a) Write the roadmap for the analytical method development of given polar compounds using HPTLC. **(3x3=9)**

b) Write the inference for the given summary of results obtained during the development of HPTLC method for Eugenol sample.

Excess of Eugenol added (%)	Concentration of Eugenol spotted (ng band ⁻¹)	Theoretical concentration of spiked sample (ng band ⁻¹)	Concentration of spiked sample \pm SD (ng band ⁻¹) (n = 3)	%Recovery \pm SD	% RSD
50	1000	1500	1497.44 \pm 40.67	99.83 \pm 2.71	2.71
100	1000	2000	1996.97 \pm 29.32	99.85 \pm 1.47	1.47
150	1000	2500	2533.77 \pm 19.16	101.35 \pm 0.77	0.76

c) Compare and contrast between dispersive IR and FT-IR.
