Paper ID : 250069

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Subject Code: BP701T

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BPHARM

(SEM VII) THEORY EXAMINATION 2024-25

INSTRUMENTAL METHODS OF ANALYSIS – THEORY

TIME: 3 HRS **M.MARKS: 75**

Note: 1. Attempt all Sections. If require any missing data; then choose suitably.

SECTION A

1. Attempt *all* questions in brief. **10 x 2 = 20**

a.	Discuss the bathochromic shift and hypsochromic shift.
b.	Define wave number and absorptivity.
c.	List any four types of detectors used in UV-Visible spectroscopy.
d.	Discuss about the sampling techniques in IR spectroscopy.
e.	What is HETP? Gives its significances.
f.	What are the different vibrational modes in IR spectroscopy?
g.	What is the principle of affinity chromatography?
h.	Write the application of nephelo-turbidimetry.
i.	Define isocratic and gradient elution.
j.	What is electrophoretic mobility?

SECTION B

2. Attempt any *two* parts of the following: **2 x 10 = 20**

a.	What is fluorimetry? Discuss quenching, instrumentation and application.
b.	Write a detail note on gas chromatography and discuss derivatization and temperature programming in gas chromatography.
c.	Discuss factors affecting on electrophoretic mobility. Write note on gel electrophoresis.

SECTION C

3. Attempt any *five* parts of the following: **7 x 5 = 35**

a.	Write note on electronic transition in UV spectroscopy.
b.	Discuss Beer's and Lambert's law with deviations.
c.	Write a detail note on the Thin Layer Chromatoghaphy.
d.	What is atomic absorption spectroscopy? Discuss principle, interference & applications.
e.	Write note on detectors used in IR spectroscopy.
f.	Write principle, instrumentation and application of HPLC.
g.	Discuss the mechanism of ion exchange process, factors affecting and applications.