M PHARM
(SEM-I) THEORY EXAMINATION 2020-21
MODERN PHARMACEUTICAL ANALYTICAL TECHNIQUES

Time: 3 Hours *Total 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.	Define chromophore with example.
b.	Enlist the various type of pump use in HPLC.
c.	Who can you distinguish alkane and alkene by IR spectroscopy?
d.	Define isotopic peaks.
e.	Define coupling constant.
f.	Write the applications of Ion exchange chromatography
g.	Define the importance of salt bridge.
h.	Give the significance of DSC.
i.	Write the pharmaceutical applications of Gel chromatography
j.	Define meta stable ions.

SECTION B

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

a.	Discuss principle and instrumentation flame photometry.
b.	Write a note on Column chromatography.
c.	Give a brief idea on DSC.

SECTION C

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

a.	Describe the theory of UV-Visible spectroscopy
b.	Write a note on ELISA
c.	Describe mass fragmentation and its rules,
d.	Discuss the principle and instrumentation of gas chromatography.
e.	Write a note on paper electrophoresis
f.	Explain the principle and application of potentiometry.
g.	Write a note on differential thermal analysis (DTA) technique