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MPHARM
(SEM I) THEORY EXAMINATION 2021-22
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.	Infer the name of light source r uses in UV-Visible spectroscopy.
b.	Recall the pharmaceutical applications of IR Spectroscopy
c.	Define chromophore with example.
d.	Explain the role of nebulizer in flame spectrophotometry.
e.	Define spin-spin coupling.
f.	What do you mean by isocratic elution?
g.	Define meta stable ions.
h.	Tell the pharmaceutical application ELISA.
i.	What are the stationary phases used in gel electrophoresis?
j.	Define modulated DSC.

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

a.	Discuss the instrumentation of IR spectroscopy.
b.	Describe the theory and instrumentation of mass spectroscopy.
c.	Explain Principle, factors affecting results, advantage and disadvantages of TGA.

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

a.	Discuss the theory and applications of UV-spectroscopy
b.	Demonstrate the principles of FT-NMR.
c.	Summarize the moving boundary electrophoresis method.
d.	Describe the principle and working condition of paper chromatography.
e.	Explain the fragmentation pattern of mass spectroscopy.
f.	Outline the brief idea on differential thermal analysis
g.	Describe the Bragg's law.