

**THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY**

**[MPHARM 0921]**

**SEPTEMBER 2021  
(OCTOBER 2020 EXAM SESSION)**

**Sub. Code: 2931**

**M.PHARMACY DEGREE EXAMINATION  
SEMESTER-I (PCI New regulations 2016)  
PHARMACEUTICS - MPH**

**PAPER I – MODERN PHARMACEUTICAL ANALYTICAL TECHNIQUES  
*Q.P. Code : 262931***

**Time : Three hours**

**Answer ALL Questions**

**Maximum : 75 Marks**

**I. Elaborate on:**

**(2 x 20 = 40)**

1. a) Principle, instrumentation and application of AAS.  
b) Principle involved in Ion exchange chromatography.
2. a) Brief outline of principles of FT-NMR and <sup>13</sup>C NMR.  
b) Applications of NMR spectroscopy, Chemical shift, Spin-Spin coupling, Coupling constant.

**II. Write notes on:**

**(7 x 5 = 35)**

1. Column Chromatography.
2. Different X-Ray diffraction methods.
3. Capillary electrophoresis.
4. Paper chromatography.
5. Mass fragmentation and its rules.
6. Sampling in IR Spectroscopy.
7. Applications of fluorescence spectrophotometer.

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