

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

[LP 951]

NOVEMBER 2019

Sub. Code: 2951

**M.PHARM. DEGREE EXAMINATION**  
**(PCI New regulations 2016)**  
**SEMESTER-I**  
**BRANCH III – PHARMACEUTICAL ANALYSIS – MPA**  
**PAPER I – MODERN PHARMACEUTICAL ANALYTICAL**  
**TECHNIQUES**

*Q.P. Code : 262951*

**Time : Three hours**

**Maximum : 75 Marks**

**I. Elaborate on:**

**(2 x 20 = 40)**

1. Write on the principle, relaxation process, chemical shift and its factors affecting, coupling constant and applications of NMR spectroscopy.
2. a) Elaborate on principles, instrumentation and deletion used in Gas chromatography.  
b) Give the IR Interpretation for:  
i)  $C_6H_5CHO$       ii) 2 – Hexene.

**II. Write notes on:**

**(7 x 5 = 35)**

1. Principles of analysis of drugs by UV absorption.
2. Biomolecular applications of gel chromatography.
3. Theory and types of fluorescence quenching.
4. Atomic absorption spectroscopy-principles and interferences.
5. Write on electrophoresis types.
6. Write about X-ray powder diffraction in structural analysis.
7. Describe the principles of TGA, DTA and DSC.

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