

# **2010 scheme**

**QP CODE: 402006**

**Reg. No: .....**

## **Final Year B.Pharm Degree Supplementary Examinations September 2023 Pharmaceutical Analysis – II**

**Time: 3 Hours**

**Total Marks: 100**

- *Answer all questions to the point neatly and legibly • Do not leave any blank pages between answers*
- *Indicate the question number correctly for the answer in the margin space*
- *Answer all parts of a single question together • Leave sufficient space between answers*
- *Draw Diagrams wherever necessary.*

**Essays**

**(3x10=30)**

1. (a) Detail the principles of  $^1\text{H}$  NMR  
(b) Define and explain with suitable example – chemical shift and spin-spin coupling
2. Explain the construction, working and application of HPLC. What is the difference between HPLC and HPTLC
3. Write note on instrumentation of spectrofluorimeter.

**Short notes**

**(14x5=70)**

4. Write the basics of radio immuno assay.
5. Classify the detectors used in IR.
6. Write a note on ionization techniques in mass spectroscopy.
7. Ultra centrifugation.
8. Compare and contrast atomic absorption and flame emission spectroscopy.
9. Explain the various techniques of thermogravimetric analysis.
10. Gas chromatography columns.
11. Write the salient features of ICH quality guidelines.
12. Derive the Beer's and Lambert's laws.
13. Write the principle and various types of development involved in paper chromatography.
14. Photo multiplier tube detector.
15. Mention the theory and application of nephelometry and turbidimetry.
16. What is polarogram.
17. Define the following

a) Molar conductance	b) Phosphorescence	c) Chromophore
d) Auxochrome	e) Stretching vibration	

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