

Total No. of Questions : 6]

SEAT No. :

P3176

[Total No. of Pages : 3

[5245]-702

**Final Year B. Pharmacy (Semester - VII)**

**PHARMACEUTICAL ANALYSIS - V**

**(2013 Pattern)**

*Time : 3 Hours]*

*[Max. Marks :70*

*Instructions to the candidates:*

- 1) *All question are compulsory.*
- 2) *Answers to the two sections should be written in separate answer books.*
- 3) *Figures to the right indicate full marks.*

**SECTION - I**

**Q1)** Describe principle, instrumentation and applications of NIR technique [10]

OR

Describe principle, instrumentation and applications of FTIR technique.

**Q2)** Attempt any five of the following : [15]

- a. Compare applications of Raman and IR techniques
- b. What are the advantages of Raman techniques?
- c. Compare SEM and TEM techniques
- d. Explain principle of SEM
- e. Explain fingerprint IR region
- f. Explain use of molecular vibrations in IR interpretation.
- g. Explain advantages of FTIR technique

**P.T.O**

**Q3)** Attempt any two of the following : **[10]**

- a. Explain characteristic IR bands of organic acid compounds.
- b. Discuss dispersive IR instrument
- c. Discuss IR solid and gas sample handling.
- d. Discuss in brief FT Raman.

**SECTION - II**

**Q4)** Discuss the principle, sample handling technique and columns used in Gas Chromatography. **[10]**

OR

Discuss the instrumentation, working and applications of Atomic Emission Spectroscopy.

**Q5)** Attempt any five of the following : **[15]**

- a) Give the applications of Gas Chromatography.
- b) What are the ideal characteristics of detectors used in GC explain.
- c) Discuss the applications of Super Critical Fluid Chromatography.
- d) Write principle of Super Critical Fluid Extraction.
- e) Write principle of Atomic Emission Spectroscopy.
- f) Why derivatization is carried out in GC?
- g) Write the theory of Atomic Emission Spectroscopy.

**Q6)** Write a note on any two of the following

**[10]**

- a) Quantitation by Gas Chromatography
- b) Flame ionisation and Electron capture detectors
- c) Instrumentation and working of Super Critical Fluid Chromatography
- d) Flash Chromatography

