Subject Code: IP31A/R13

M. Pharmacy –I Semester Regular Examinations, March, 2014

MODERN ANALYTICAL TECHNIQUES

(Common to all Specializations)

Time: 3 Hours **Max Marks: 60**

Answer any FIVE questions

All questions carry EQUAL marks

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1. Briefly outline the following (4+4+4) M
   a) Electronic transition induced during electronic absorption of UV radiation.
   b) Explain the important of following in the structural elucidation of organic molecules
      i) Finger print region ii) Over tones.
   c) Write the principle of Spectrofluorimetry.

2. a) Explain the term chemical shift and discuss the factors influence in chemical shift. 6 M
   b) Write a note on the following 3 M
      i) Longitudinal relaxation ii) Transverse relaxations
   c) Explain Nuclear Over Hauser effect. 3 M

3. a) Write the principle and applications of atomic emission spectroscopy based on plasma source. 8 M
   b) Differential between HPLC and HPTLC. 4 M

4. a) With the neat diagram explain the working of HPLC. 8 M
   b) Write detailed note on detectors used in HPLC. 4 M

5. Give short note on
   a) Enlist various gels used in size exclusive in chromatography. 4 M
   b) Principle and applications of Super critical fluid chromatography 8 M

6. a) Discuss in detail the methods of derivatization in GLC. 6 M
   b) Explain Mc Lafferty's rearrangement with examples. 6 M

7. Give short note on the following. (6+6)M
   a) LCMS
   b) Vapour phase chromatography

8. a) Write briefly on Bragg's law. 4 M
   b) Write the principle and applications of ORD 4M
   c) Write about Cationic and anionic exchanger. 4 M

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