MPY–101

M. Pharm. (First Semester)
EXAMINATION, Dec., 2011
(Grading/Non-Grading)
MODERN ANALYTICAL TECHNIQUES
(MPY – 101)

Time : Three Hours

Maximum Marks : $\begin{cases} GS : 70 \\ NGS : 75 \end{cases}$

Note : Attempt any *five* questions. All questions carry equal marks.

1. (a) Discuss principle, advantages and applications of FT-IR.
   (b) Explain the different molecular vibrations and how they can be predicted ?
2. (a) What is spin-spin coupling ? Explain giving examples and applications.
   (b) Write principle and applications of UV.
3. (a) Write a note on interfaces used in HPLC-MS.
   (b) Write theory and applications of ultracentrifugation.
4. (a) How stationary phase is selected in GLC ? What are their essential characteristics ?
   (b) State and explain Van-Deetmer equation.

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5. (a) Write an exhaustive note on HPTLC.
   (b) Explain giving examples and applications Ion Pair chromatography.
6. (a) Describe giving examples and applications Enzyme assays.
   (b) Explain principle, instrumentation and applications of DTA.
7. (a) Write a note on phase contrast microscopy giving applications.
   (b) Write a note on flow cytometry.
8. Write short notes on any *four* of the following :
   (a) Solvents used in NMR
   (b) Fragmentation pattern of ketones
   (c) Fluorescence and its applications
   (d) Liquid scintillation spectrometry
   (e) Electrophoresis