Rajiv Gandhi University of Health Sciences

First Year M. Pharm Degree Examination – May 2013

[Time: 3 Hours]   [Max. Marks: 100]

MODERN PHARMACEUTICAL ANALYSIS

(RS 2 & RS 3)

Q.P. CODE: 9201

Your answers should be specific to the questions asked.
Draw neat labeled diagrams wherever necessary. Answer all questions

LONG ESSAY (Answer any TWO)   **2 X 20 = 40 Marks**

1. What is HETP? How is it calculated? Explain its significance. Explain the principle and applications of HPTLC in pharmacy

2. Explain the following (a) Spin-Spin coupling, (b) Nuclear overhauser effect, (c) Shift reagent method and (d) ^{13}C-NMR spectroscopy

3. Discuss the principle and instrumentation of EI mass spectrometry. What is Mclafferty rearrangement? Explain with examples

SHORT ESSAY (Answer any FIVE)   **5 X 10 = 50 Marks**

4. Explain in detail 'cotton effect' and 'Circular dichroism'

5. Explain the principle and working of FTIR instrument

6. Write notes on (i) Van deemeter equation and (ii) Bragg's law

7. Explain the theory of uv-visible spectroscopy including the concepts of energy level, transition types, chromophore and the laws of absorption

8. Describe the various kinds of detectors used in gas chromatogrphy

9. Write notes on 'zone electrophoresis' and 'isoelectric focusing'

SHORT NOTES   **2 X 5 = 10 Marks**

10. Write a brief account on GC-MS

11. What are the limitations of Beer-Lambert's law

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