Rajiv Gandhi University of Health Sciences

First Year M. Pharm Degree Examination - 09-Jan-2020

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

Modern Pharmaceutical Analysis
(Revised Scheme 4)
Q.P. CODE: 9336

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

LONG ESSAY (Answer any TEN)   **10 X 10 = 100 Marks**

1. Explain the instrumentation of HPLC with block diagram. Write the construction working and demerits of UV detector used in HPLC.

2. What is spin-spin splitting? Give the rules that characterize the spin-spin of PMR resonance peak

3. Define Beer's and Lamberts law. Give its derivation. Write in brief about the factors which effect the deviation of Beer's law.

4. Explain briefly about the importance of statistical analysis.

5. Explain the principle involved in electron impact ionization. Write its merit and demerits. Explain the principle and working of any two mass analyser used mass spectroscopy.

6. Write a note on coupling and decoupling methods and its significance in NMR spectroscopy.

7. Explain the isoelectric focusing technique in electrophoresis and mention its applications. Explain factors that affect the migration of ions in electrophoresis.

8. Write the principle of differential scanning calorimeter. What factors are responsible for affecting DSC results and write the applications of DSC.

9. What is derivatization? Explain the various methods of derivatizations in gas chromatography.

10. Briefly outline the molecular vibrations in IR spectroscopy. What is 'Fermi resonance'? Explain the factors affecting the absorption position in IR spectroscopy.

11. Define circular birefringence and Circular Dichroism. Write notes on principle and applications of Circular Dichroism.

12. Write the principle involved in paper chromatography. Explain the various methods of preparation of TLC plates.

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