Rajiv Gandhi University of Health Sciences

First Year M. Pharm Degree Examination – JAN-2019

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

MODERN PHARMACEUTICAL ANALYSIS

(RS2 & RS3)

Q.P. CODE : 9201

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

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

1. What is 2D-NMR? Explain fundamental principles of NMR. Describe different relaxation phenomenon of NMR spectrometry.
2. Classify different chromatographic methods and explain efficiency parameters of HPLC. Give development techniques for Thin Layer Chromatography. Compare TLC and HPTLC techniques.
3. a) Discuss in detail any two different types and applications of zone and moving boundary electrophoresis.
   b) Explain factors affecting migration of ions in electrophoresis.

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

4. Explain in detail about selection of mobile phases in HPLC.
5. Discuss in detail sample preparation in IR spectroscopy. How FTIR differs from classical IR spectroscopy.
6. Discuss X-ray powder diffractometer and its principle and pharmaceutical applications.
7. Describe mass spectrometer and different types of ions encountered in MS.
8. Explain the Vandeemter equation and its significance. Elaborate on different injection techniques of gas chromatograph.
9. Explain INSA and ICMR guidelines for Human/Animal experimentation.

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

10. What do you mean by chromophore? How it interacts with electromagnetic spectrum?
11. Give brief outline of different cotton effect curves.

* * * * *