

VINAYAKA MISSION'S RESEARCH FOUNDATIONS, SALEM
(Deemed to be University)

B.PHARM. DEGREE EXAMINATION – August 2018
Fourth Year

MODERN METHODS OF PHARMACEUTICAL ANALYSIS

Time : Three hours

Maximum: 90 marks

I. Write essays on any **TWO** questions: **(2 x 15 = 30)**

1. a) Theory of electronic transitions involved in the UV – visible spectroscopy(5)
b) Enumerate the concept of Beer's and Lambert's theory (5)
c) Write the applications of Beer's and Lambert's theory (5)
2. a) Explain the principle involved in the polyatomic vibration theory (5)
b) Write the construction difference between Thermocouple and Thermister (5)
c) Sample handling techniques in FTIR (5)
3. a) Compare and contrast the Atomic absorption spectroscopy and Flame Emission spectroscopy (10)
b) Write the applications of Atomic absorption spectroscopy (5)

II. Write short essays on any **EIGHT** questions: **(8 x 5 = 40)**

4. Write the applications of NMR spectroscopy.
5. Explain the principle involved in the ion exchange chromatography.
6. Define and classify the quenching with examples.
7. Write a note on TLC plates preparation techniques.
8. Classify the types detectors used in gas chromatography. Write any one in detail.
9. Write the difference between electrophoresis and gel chromatography.
10. Define specific conductance and write the applications in conductometry analysis.
11. Enumerate the basic principle involved in the X-Ray diffraction.
12. Write the methodology involved in the calibration of UV-Visible spectrophotometer.
13. Write about potentiometric curves and its applications.

III. Write short notes on any **TEN** questions: **(10 x 2 = 20)**

14. Define Red shift.
15. What is HETP?
16. Define Fragment ion.
17. Write a note on spot detecting reagents in TLC.
18. Define Electro Motive Force.
19. Write the different types of gels used in gel filtration method.
20. Define partition coefficient.
21. Write an example for chemical ionization process.
22. What do you mean by counter ion?
23. Define super critical fluid.
24. Write the difference between exothermic and endothermic reactions.