

**Final Year B.Pharm Degree Supplementary Examinations  
November 2018****Pharmaceutical Analysis – II  
(2010 scheme)****Time: 3 Hours****Total Marks: 100**

- Answer all Questions.
- Draw diagrams and equations wherever necessary.

**Essays****(3x10=30)**

1. Explain the construction and working principle of glass electrode. Add a note on the principle and methodology of water determination by potentiometric titration.
2. Give an account of instrumentation and applications of HPLC
3. Discuss the principle, instrumentation and applications of IR spectrophotometers

**Short notes****(14x5=70)**

4. Explain technique of paper chromatography with a diagram
5. Describe principles of column chromatography. Define theoretical plate
6. Ionization types in mass spectrometry
7. Describe the principle and applications of atomic emission spectroscopy
8. Methods to perform quantitative analysis by U V Spectroscopy.
9. Explain the principle of chemical shift in NMR spectroscopy
10. Salient features of ISO 9000
11. Describe the instrumentation of electrophoresis
12. Classify ion exchangers. Describe their applications.
13. What are thermal methods of analysis. Describe their applications
14. Explain construction and working principle of flame ionization detector
15. What is a dropping mercury electrode. Mention its significance in chemical analysis
16. What are the differences between fluorescence and phosphorescence. Describe the application of fluorimetric analysis in pharmaceutical analysis.
17. Explain bathochromic shift and hypsochromic shift in U V Spectroscopy

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