

**PHARMACEUTICAL ANALYSIS - II**

**Time: 3 Hours**

**Total Marks: 100**

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

**Essay**

**(3x10=30)**

1. Explain the construction and working of UV spectrophotometer with a neat labeled diagram. How the absorbance, path length and concentration are related.
2. Explain the construction and working of any two detectors used in gas chromatography in detail.
3. Classify ion exchangers used in ion exchange chromatography with suitable examples. Describe the mechanism of ion exchange with suitable reactions. Explain any two applications of ion exchange chromatography

**Short notes**

**(14x5=70)**

4. Applications of conductometric titrations
5. Applications of high performance thin layer chromatography (HPTLC)
6. Different types of validations
7. ICH guidelines
8. Applications of X-ray diffraction
9. Construction and working of standard hydrogen electrode
10. Different methods of preparation of plates in TLC
11. Principle of separation in electrophoresis
12. Different techniques used in paper chromatography
13. Different titration curves used in amperometry
14. Apparatus used in polarography
15. Pharmaceutical applications of thermal analysis
16. Working principle of the instrument used in turbidimetry
17. Principle of flame photometry

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