

**PHARMACEUTICAL ANALYSIS**

**Time: 3 Hours**

**Total Marks: 100**

- Answer all Questions.
- Write equations wherever necessary.

**Essay**

**(3x10=30)**

1. Discuss different steps in gravimetric analysis and explain co-precipitation and post precipitation
2. Explain the theory of redox titrations with suitable examples. Explain standard oxidation potential.
3. Explain neutralization curves. Discuss the curve of strong acid, strong base titration. What are mixed indicators.

**Short notes**

**(14x5=70)**

4. Explain Werner's co-ordination number. What is the importance of buffer in complexometry.
5. Mention the different types of solvents used in non aqueous titration. .
6. Definition and classification of reactions in titrimetric analysis.
7. Explain primary and secondary standards with examples.
8. Explain the importance of quality control of drug.
9. Explain Kjeldhal method of nitrogen estimation.
10. Explain law of mass action.
11. Explain complexation and chelation.
12. Explain the different methods of determination of end point in precipitation titrations.
13. Mention the methods of assay of ascorbic acid.
14. Calibration of burettes and pipettes.
15. Explain accuracy and precision.
16. Explain the Henderson Hasselbach equation
17. Pharmaceutical applications of thermogravimetry.

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