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

Analytical Assurance (Revised Scheme 4)

Q.P. CODE: 9363

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. Write a note on Validation of an Analytical method as per ICH E6 guidelines.
- 2. a) Explain different types of Stability Analysis in Bioanalytical method Validation along with their relevance.
  - b) Differentiate Herbal Substances, preparations and products.

(15+5)

3. Write a note on Residual Solvents identification, characterization and quantification by LC-MS/MS.

## **SHORT ESSAY (Answer any FIVE)**

5 X 10 = 50 Marks

- 4. What are Forced Degradation Studies? Why and how are they performed?
- 5. Compare and contrast EU and Who requirements for Herbal Products.
- 6. Explain the principle, advantages and disadvantages of RIA (Radio Immuno Assay).
- 7. Write a note on Statistics used in Bioassay.
- 8. How Antimicrobial Effectiveness Testing is performed as per USP?
- 9. How is the Performance Qualification of a HPLC done?

SHORT NOTES 2 X 5 = 10 Marks

- 10. Enlist the Production and Research Applications of NIR (Near Infra Red) Spectroscopy.
- 11. What is High Through Put Screening? Explain briefly.

MANN FIRST PARTY \*\*\*\*