Time: Three Hours Max. Marks: 100 Marks

## Pharmaceutical Technology and Validation (Revised Scheme 4) Q.P. CODE: 9362

Your answers should be specific to the questions asked.

Draw neat, labeled diagrams wherever necessary. Answer any ten questions.

## **LONG ESSAY (Answer any TEN)**

10 X 10 = 100 Marks

- 1. Explain the concept of evaluation of shelf life of a Pharmaceutical product as per ICH Q1E quideline.
- 2. Explain the evaluation procedure of Type I and Type II glass containers as per IP requirements.
- 3. Explain the general principles of product packaging compatibility.
- 4. Explain the different approaches to collect the cleaning validation samples. Explain the concept of couponing for collecting cleaning validation samples.
- 5. What is revalidation? Explain the situations in which revalidation is essential?
- 6. What is IVIVC? Explain different levels of IVIVC correlations.
- 7. Explain the concept of SUPAC. How do you handle a SUPAC with a change in critical excipient for a scaled-up IR dosage form?
- 8. Explain with appropriate equations the F1 and F2 factors in dissolution testing.
- 9. Explain the tenets of GAMP and explain its applicability in pharmaceutical manufacturing.
- 10. How will you validate a double cone blender?
- 11. Discuss the factors affections dissolution and add a note on pharmacopoeial dissolution testing models.