



- Notes :
1. All questions carry equal marks.
 2. Diagrams and Chemical equation should be given wherever necessary.
 3. Illustrate your answers wherever necessary with the help of neat sketches.
 4. Que. 1 is compulsory, solve **any four** from remaining.

1. Solve **any four**. **16**
 - a) Explain the effect of WTO with regards to pharmaceuticals.
 - b) Give the standard operating procedure for coating.
 - c) Define validation. Describe equipment validation.
 - d) Write a note on trademark.
 - e) Write a note on clinical research protocol.
 - f) Explain total quality management.
2. a) Give a detail account on GMP. **8**
 - b) What is validation? Describe in detail about process and personnel validation. **8**
3. a) Explain Responsibilities and sampling test procedure of quality control department. **8**
 - b) Write a note on quality control documentation and audits of QC facilities. **8**
4. Explain preclinical and clinical trials in detail. Describe procedure and application of Investigational new drug. **16**
5. a) Give a detail account on GLP. **8**
 - b) Explain in detail patent procedure. Add a note on patent licensing. **8**
6. a) Write a note on ICH guidelines. **8**
 - b) Describe the broacher preparation for IND. **8**
7. Solve **any four**. **16**
 - a) Copyright. b) Intellectual property rights.
 - c) ISO. d) Clinical research protocol.
 - e) Validation of air handling system.
