

QP Code : 717101

(3 Hours)

[Total Marks : 70

- N.B. : (1) All questions are **compulsory**.
(2) **Draw neat diagrams** wherever **necessary**.

1. (a) Enlist the various parameters considered during validation of Mixing Operation. Illustrate your answer with the help of suitable Mixing equipment. 4
1. (b) Why it is important to perform sale forecasting studies? Correlate these studies with the production planning operation. 4

OR

1. (b) Discuss the various elements of Cost Control in material management. 4
1. (c) Explain any one laboratory technique to study mucoadhesion. 3
1. (d) Give the basic principles of Osmosis. 2
1. (e) How the potency of the Antibiotic is determined? Illustrate your answer with suitable example. 2

2. (a) Write the mechanism of Microencapsulation by interfacial polymerisation method. Explain it with the help of suitable example. 4

OR

2. (a) Write in brief about any one industrial process used for Microencapsulation. 4
2. (b) Give the layout plan for manufacturing of terminally sterilized product. 4
2. (c) Comment: Successful application of cGMP is complex and by no means a substitute for good quality programme. 3

3. (a) Give the advantages of the Transdermal drug delivery system. How will you design Membrane permeation controlled Transdermal drug delivery system? 4

3. (b) How will you validate Steam sterilization cycle? 4

3. (c) Write in brief about Retrieval of documents. 3

4. (a) Discuss the various factors to be considered in the designing of Facility for small scale pharmaceutical industry. 4

4. (b) Enlist the essential steps in the construction of Control charts. Write the importance of UCL & LCL in the construction of control charts. 3

4. (c) Give the concept of Active & passive targeting. 2

4. (d) Give the need for colon specific drug delivery system. 2

OR

4. (d) Enlist the various types of Bioadhesive polymers used in drug delivery.

[TURN OVER]

5. (a) Write the specifications for the inert material with respect to its Quality control. 2
 5. (b) Explain the various factors affecting mucoadhesion. 2
 5. (c) Mention the reasons for the Microencapsulation. 4
 5. (d) Discuss the essential Qualification requirement for the Personnel working in the production department. 2
6. (a) Explain with the help of suitable examples design & release kinetics of Osmotic pumps. 4
 6. (b) Prepare the Batch Manufacturing Record for Cough Syrup. 4
- OR**
6. (b) Discuss the various parameters considered during scale up of suspension. 4
 6. (c) Develop colon targeted drug delivery system by using pH sensitive polymers. 3
