Roll No. ☐☐☐☐☐☐☐☐☐☐☐☐☐   Total No. of Pages : 02

Total No. of Questions : 13

B.Pharma (Sem.–3)
PHARMACEUTICAL ENGINEERING
Subject Code : BP-304T
M.Code : 75108
Date of Examination : 19-12-22

Time : 3 Hrs.   Max. Marks : 75

INSTRUCTIONS TO CANDIDATES :
1. **SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.**
2. **SECTION-B contains THREE questions carrying TEN marks each and student has to attempt any TWO questions.**
3. **SECTION-C contains NINE questions carrying FIVE marks each and student has to attempt any SEVEN questions.**

SECTION-A

1. **Explain briefly :**

   a. Impact as a method of size reduction

   b. Bernoulli's theorem

   c. Sieve number

   d. Fourier's Law

   e. Evaporation

   f. Loss on drying

   g. Centrifugal effect

   h. Filter aids

   i. Corrosion

   j. Packed columns

SECTION-B

2. Write an explanatory note on solid-solid mixing. Describe an equipment used for the solid-solid mixing with advantages, limitations and applications.

3. Describe the different theories of corrosion. Explain the various types of corrosion and the methods of prevention.

4. Describe in detail the principle behind fractional distillation. Write a note on plate columns.

SECTION-C

5. Highlight the significance of Reynold's number.

6. Describe the various laws governing size reduction.

7. Write a note on cyclone separator.

8. Describe the various mechanisms of heat transfer.

9. Discuss the working of horizontal tube evaporator.

10. Describe a dryer based upon the principle of sublimation.

11. Write a note on rotary filters.

12. Discuss the construction and working of tubular bowl centrifuge.

13. Discuss the advantages of steel and glass as materials of plant construction.

NOTE : Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the Student.