DEC-23-0073

BP-304 T (Pharmaceutical Engineering)

B.Pharm-3rd (PCI)

Time : 3 Hours   Max. Marks : 75

Note: The question paper contains three sections in all, Section A, B and C. In Section A, all questions are compulsory. From Section B student has to attempt any two questions and from Section C student has to attempt any seven questions.

SECTION-A

Short Answer (Compulsory)   (10×2=20)

1. Answer the Following:

a. How Reynolds number is used to differentiate between types of fluid flow?

b. Why mercury is used as a liquid in the manometer?

c. Name the forces responsible for size reduction.

d. Explain the term 'Azeotropic distillation'.

e. Define Equilibrium moisture content.

f. Suggest solutions for the problems of vortex formation.

g. Describe briefly the mechanism of corrosion.

h. Explain the term 'Black body'.

i. What is the difference between sedimentation and elutriation?

j. Describe Raoult's law and its significance.

SECTION-B

Long Answer (Any Two)   (2×10=20)

2. Write the construction, working, principle, advantages and limitations of sieve shaker machine.

3. Classify evaporators. Describe the principle, construction and working of climbing film evaporator with a neat labeled diagram.

4. Explain the construction, principle and operational details of spray dryer with its pharmaceutical applications.

SECTION-C

Short Note Answer (Any Seven)   (7×5=35)

5. Explain the working and principle of orifice meter.

6. Discuss different theories of size reduction.

7. Write about the principle and procedure of simple distillation.

8. Explain the working of any one heat exchanger with labeled diagram.

9. Elucidate different mechanisms of solid mixing.

10. What are filter aids? Name the filter aids commonly used in pharmacy practice.

11. Write in detail about supercentrifuge.

12. What are the measures to prevent and control corrosion?

13. Write a note on importance of glass and stainless steel in pharmaceutical industry.