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

Total No. of Questions : 13

B.Pharma (2017 Batch) (Sem.–3)

PHARMACEUTICAL ENGINEERING

Subject Code : BP-304T

Paper ID : [75108]

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. Answer briefly :

a) What is Reynold's number?

b) What is the principle of operation of Hammer Mill?

c) What is meant by sieve number?

d) Differentiate between conduction and convection.

e) Mention applications of flash distillation.

f) What is equilibrium moisture content?

g) Mention four filter aids.

h) Define specific heat and mention its units.

i) Differentiate between wet and dry bulb temperatures.

j) Mention the types of glass used for packaging liquids.

SECTION-B

2. a) Enumerate the factors influencing energy loss during flow of fluids. Explain the remedies for them.

   b) Enumerate the principles of size reduction. Explain the operation of Ball Mill.

3. a) Explain the mechanisms of heat transfer. Discuss the operation of heat exchangers.

   b) Discuss the process and applications of molecular distillation process.

4. a) Explain the mechanism of drying with the help of a typical drying curve. Describe the working of a spray dryer.

   b) Discuss the operation of a rotary drum filter.

SECTION-C

5. Write a note on non-perforated basket centrifuge and its applications.

6. Enumerate the types of corrosion and mention the precautions to be taken to prevent them.

7. Write briefly about elutriation method.

8. What is a climbing film evaporator? Describe its operation and advantages.

9. What is a Sigma Blade Mixer? Mention its applications.

10. Explain plate and frame filter and mention its advantages and limitations.

11. Comment on nonferrous materials used in pharmaceutical plants.

12. Draw the view of a venturi meter and explain the measurement of fluid flow through it.

13. Illustrate a fluidized bed dryer and explain its operation. Mention its applications in pharmaceutical industry.