Roll No. | | | | | | | | | | | | |

Total No. of Pages : 02

Total No. of Questions : 10

B.Pharmacy (Sem.–4)

PHARMACEUTICS-III (UNIT OPERATION-II)

Subject Code : PHM-241

Paper ID : [D0159]

Time : 3 Hrs. Max. Marks : 80

INSTRUCTIONS TO CANDIDATES :

1. **SECTION-A is COMPULSORY consisting of FIFTEEN questions carrying TWO marks each.**
2. **SECTION-B contains FIVE questions carrying FIVE marks each and students have to attempt any FOUR questions.**
3. **SECTION-C contains FOUR questions carrying TEN marks each and students have to attempt any THREE questions.**

SECTION-A

1. Answer briefly :

a) What is meant by mole volume?

b) Define Raoult's Law.

c) What is Boiler Capacity?

d) Give example of a size reduction machine operating by attrition mechanism.

e) What is 'latent heat'?

f) What is triple point?

g) Define critical moisture content.

h) What is equilibrium moisture content?

i) What is loss on drying?

j) What is an Azeotropic mixture?

k) Name two liquid-solid mixing equipments.

l) Mention the principle of operation of a free dryer.

m) What is evaporation and how does it differ from sublimation?

n) Mention the units of measuring steam pressure.

o) Define flash distillation process and mention its applications.

SECTION-B

2. What is a boiler capacity and how it is determined?

3. Explain the steps involved in evaporation. Mention the factors affecting evaporation rate.

4. Enumerate solid-solid mixing equipments and explain the working of any one.

5. Discuss briefly the working of a fluidized bed dryer.

6. Discuss the operation of a ball mill. Mention the modifications of a ball mill and their applications.

SECTION-C

7. Discus the theory of heat transfer and compare steam and electricity as source of heat for pharmaceutical operations.

8. Discuss the concept and mechanism of operation of multiple effect evaporators.

9. What is rectification? Discuss the method used for calculating number of theoretical plates.

10. Discuss the factors influencing size reduction process.