

C.U.SHAH UNIVERSITY**Winter Examination-2021****Subject Name: Pharmaceutical Engineering - Theory****Subject Code: BP304T****Branch: B.Pharm****Semester: 3****Date: 16/12/2021****Time: 02:30 To 05:30****Marks: 75****Instructions:**

- (1) Use of Programmable calculator & any other electronic instrument is prohibited.
- (2) Instructions written on main answer book are strictly to be obeyed.
- (3) Draw neat diagrams and figures (if necessary) at right places.
- (4) Assume suitable data if needed.

Q-I Explain the following terms briefly: (20)

- | | |
|---------------------------------|---|
| a. Equilibrium Moisture Content | b. Applications of evaporation |
| c. Dalton's law | d. Bond's law |
| e. Pressure head | f. Applications of Bernoulli's equation |
| g. Advantages of bag filter | h. Black body |
| i. Darcy's equation | j. Applications of centrifugation |

Q-II Write long answers of any two: (20)

- a. Discuss in detail Freeze Dryer. (10)
- b. Explain principle, construction, working, advantages, disadvantages and applications of Ball mill. (10)
- c. Discuss in detail Orifice meter with the help of neat labeled diagram. (10)

Q-III Write short answers of any seven: (35)

- a. Explain construction, working, merits and demerits of flash distillation. (5)
- b. Write the various factors affecting the rate of evaporation. (5)
- c. Describe the principle, construction, merits and demerits of Fluidized Bed Dryer. (5)
- d. Write the principle, construction and working of Simple manometer. (5)
- e. Write the principle, construction and working of Rotameter. (5)
- f. Derive an equation for conduction of heat through a metal wall. (5)
- g. Write difference between solid mixing and liquid mixing. (5)
- h. Explain principle, construction and working of Meta filter. (5)
- i. Write the different types of stainless steel with their composition, advantages, disadvantages and uses. (5)

