C.U.SHAH UNIVERSITY
Winter Examination-2022

Subject Name: Pharmaceutical Engineering- Theory
Subject Code: BP304T   **Branch: B.Pharm**
Semester: 3   Date: 24/11/2022   Time: 11:00 To 02:00   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   **Answer the followings in brief**   **(20)**

  1.   Enumerate the factors affecting size reduction.   02
  2.   Explain Bond's law and Rittinger's law.   02
  3.   What is Heat transfer?   02
  4.   Briefly explain Reynold's number.   02
  5.   Differentiate Drying and Evaporation.   02
  6.   Define EMC and FMC.   02
  7.   Give objectives of Evaporation.   02
  8.   Briefly explain Distillation.   02
  9.   Discuss the types of Mixtures.   02
  10. Define Filtration and Centrifugation.   02

Q-II   Attempt any two: **(20)**
  1.   Discuss principle, construction, working, advantages and disadvantages of Ball Mill.   10
  2.   Draw a labelled diagram of drying rate curve and explain Equilibrium relationship and Rate relationship.   10
  3.   Write a detail note on mixers used for semisolid mixing.   10

Q-III   Attempt any seven: **(35)**
  1.   Explain principle, construction and working of Tray dryer.   5
  2.   Discuss the mechanism of size reduction.   5
  3.   Give standards for powder according to pharmacopoeia.   5
  4.   Classify mixers for liquid mixing. Discuss Propeller mixer in detail.   5
  5.   Explain in detail multiple effect evaporator.   5
  6.   Discuss Simple distillation with labelled diagram.   5
  7.   Write a note on Filter aid and Filter media.   5
  8.   Discuss the theory of centrifugation.   5
  9.   Write a note on Glass as a material for plant construction.   5