DR. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY, LONERE
End Semester Examination – Winter 2022

Date:

Course: **B. Pharmacy**
Subject Name: **Pharmaceutical Engineering**
Max Marks: **75**

Sem:
Subject Code:
Duration: **3 Hr.**

Instructions:
1. All questions are compulsory
2. Draw diagrams / figures wherever necessary
3. Figures to right indicate full marks

Q. 1.   Objective Type Questions (Answer all the questions) (10 x 2) = 20

i)   What is Reynold's number? Give its importance.

ii)   What are heat exchangers. Give their types.

iii)   Define evaporation. Classify evaporators.

iv)   Give the applications of drying.

v)   Describe the modes of size reduction.

vi)   Differentiate between solid mixing and liquid mixing.

vii)   Write the advantages and disadvantages of plastics as material of construction.

viii)   Explain the term pitting corrosion and galvanic corrosion.

ix)   Explain the mechanism of filtration.

x)   State Fourier's law with equation.

Q. 2.   Long Answers (Answer 2 out of 3) (2 x 10) = 20

i)   Define Centrifugation. Classify centifuges with suitable examples. Discuss in detail on perforated basket centrifuge.

ii)   Write the advantages of size reduction. Discuss the factors affecting selection of a mill for size reduction.

iii)   Classify distillation. Explain the principle, construction, working and applications of molecular distillation.

Q. 3.   Short Answers (Answer 7 out of 9) (7 x 5) = 35

i)   Explain in detail about short tube evaporator.

ii)   With the help of neat labelled diagram explain fluidised bed dryer.

iii)   Write the theory of vortex formation and give its prevention methods.

iv)   Discuss on the various modes of size separation.

v)   What are filter aids? Why are the used. Enlist the filter aids used in pharmacy practice.

vi)   Classify materials of construction. Discuss about various types of ferrous metals used.

vii)   Describe the various modes of heat transfer with suitable examples.

viii)   Explain the factors influencing mixing of solids. Write the principle of planteraty mixer