

**VINAYAKA MISSION'S RESEARCH FOUNDATION
(DEEMED TO BE UNIVERSITY), SALEM**

**B.PHARM. DEGREE EXAMINATION – July 2021
Third Semester**

PHARMACEUTICAL ENGINEERING

Time : Three hours

Maximum: 75 marks

I. Write essays on any **TWO** questions: (2 x 10 = 20)

1. Construct fluidized bed dryer and its working. Compare the advantages over other dryers.
2. Sketch multiple effect evaporators. Its working principle, merits and demerits.
3. Emphasis on the various materials used for pharmaceutical plant construction.

II. Write short answers on any **SEVEN** questions: (7 x 5 = 35)

4. Write the types and working of differential manometer.
5. Differentiate edge runner and end runner mil. Write its merits and demerits.
6. Write the standard grades of powders according to I.P.
7. Factors affecting evaporation.
8. Theoretical plates in fractionation. Write its types.
9. Principle, construction and uses of Lyophilizer.
10. Construct anyone blender with their merits and demerits.
11. Meta filter and its applications.
12. Write the Pharmaceutical application of centrifugation.

III. Write short notes on : (10 x 2 = 20)

13. Reynolds number and its significance.
14. Laws governing size reduction.
15. Bag filter.
16. Fourier's law in heat transport.
17. Difference between evaporation and drying.
18. Define fractional distillation.
19. What is double cone blender and twin shell blender?
20. Uses of membrane filter.
21. What is super centrifugation?
22. What is a Calandria?
