

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

**B.PHARM. DEGREE EXAMINATION – JANUARY 2020
Seventh Semester**

NOVELS DRUG DELIVERY SYSTEM

Time : Three hours

Maximum: 75 marks

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

1. Classify polymers. Write its application in formulating the controlled release dosage form
2. a) Write in brief about the components used in transdermal formulations.
b) Elaborate the factors affecting drug penetration.
3. Illustrate the formulation and evaluation of nanoparticles.

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

4. Write a note on applications for microparticulate drug delivery.
5. Ion exchange resin.
6. Sketch and explain in brief about osmotic pump.
7. Dry powder inhalers.
8. Methods to overcome the barriers in ocular delivery.
9. Factors affecting drug permeation through skin.
10. Write an outline about monoclonal antibodies.
11. Differentiate the principles involved in diffusion and dissolution controlled release formulation.
12. Write a short note on approaches in buccal drug delivery.

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

13. Nebulizer.
14. Define buoyancy agent with two suitable examples.
15. Controlled release.
16. Niosomes.
17. Bioadhesion
18. Name two intra uterine devices.
19. List four hydrophobic polymers.
20. Microcapsules.
21. List the approaches in buccal delivery with one example each.
22. Advantages of transdermal delivery.