

Exam Date & Time: 18-Jul-2022 (10:00 AM - 01:00 PM)



## MANIPAL ACADEMY OF HIGHER EDUCATION

Manipal Academy of Higher Education, Manipal MPharm Theory End-Semester Examinations.

### Pharmaceutical Production Technology [PCE-MIP203T]

**Marks: 75**

**Duration: 180 mins.**

#### SECTION - A

**Answer all the questions.**

Answer the following (10 marks x 5 = 50 marks)

- 1) Explain the method, instrumentation, significance, and limitations of hot-melt extrusion technology. (10)
- 2) Explain the sources of contamination in parenteral production with their preventive methods. (10)
- 3) Explain the freeze-drying and spray-drying mechanism with schematic representation. (10)
- 4) Enlist the equipment used for manufacturing of soft gelatin capsules. Explain any TWO with suitable diagram. (10)
- 5) (a) Discuss the materials used for secondary and tertiary packaging. 5 Marks  
(b) Write a note on reverse osmosis. 5 Marks (10)

#### SECTION - B

**Answer all the questions.**

Answer the following (5 marks x 5 = 25 marks)

- 6) Explain the design of any ONE equipment with a diagram that is used for the controlled release coating of pellets. (5)
- 7) Explain the principle, applications and limitations of Piston homogenizer. (5)
- 8) Discuss the requirements of "wall and floor" in parenteral production unit. (5)
- 9) Enlist different types of mixers/mixing devices used in the manufacturing of disperse systems. Explain any TWO. (5)
- 10) Write the functions of different components of air handling units. (5)

-----End-----