

Question Paper

Exam Date & Time: 16-May-2023 (02:00 PM - 05:00 PM)



MANIPAL ACADEMY OF HIGHER EDUCATION

M.Pharm (Industrial Pharmacy) -Theory End-Semester Examinations. May 2023

Pharmaceutical Production Technology [PCE-MIP203T -S1]

Marks: 75

Duration: 180 mins.

SECTION - A

Answer all the questions.

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

- 1) Explain the instrumentation, working principle and significance of rapid mixer granulator. (10)
- 2) Discuss the typical layout of the parenteral plant and classify the environment control zone. (10)
- 3) Explain the atomization process in spray drying with suitable diagrams. (5)
A)
- B) Explain the role of process condenser and shelf fluid system in lyophilizer. (5)
- 4) Write the importance of different types of packaging and explain the basic labelling and printing requirement for pharmaceutical products. (10)
- 5) Explain the equipments used for manufacturing of soft gelatin capsules. (5)
A)
- B) Explain the basic component of the RO system. (5)

SECTION - B

Answer all the questions.

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

- 6) Explain the basic principles of material handling. (5)
- 7) Explain the design of Anchor Plus Dispenser. Explain the factors to be considered for emulsification of immiscible liquids. (5)
- 8) Write in detail about the general equipments required for the manufacture of parenteral preparation. (5)
- 9) Explain the design and various parts of microfluidizer technology. (5)
- 10) Write the objectives and specifications of air handling systems used in pharmaceutical industries. (5)

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