

Question Paper

Exam Date & Time: 02-May-2019 (02:00 PM - 05:00 PM)



MANIPAL ACADEMY OF HIGHER EDUCATION

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

Specialization: Industrial Pharmacy

MPharm Semester II- End Semester Examination May 2019

Date: 02/05/19

Scale-up and Technology Transfer [PCE-MIP202T]

Marks: 75

Duration: 180 mins.

SECTION - A

Answer all the questions.

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

- 1) Discuss on raw material selection, space requirement, personal requirement and review of formula during scale up stage of formulations. (10)
- 2) Discuss on different stages of process validation. (10)
- 3) Explain the vendor development procedure for a new Active Pharmaceutical Ingredient as per GMP system. (10)
- 4) What is User Requirement Specification? Discuss the components of URS. (10)
- 5) Explain Installation Qualification with an example. (10)

SECTION - B

Answer all the questions.

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

- 6) Explain the primary treatment of effluent by coagulation method. (5)
- 7) Discuss on causes of fire hazards in pharma industry. (5)
- 8) Define following terms (i) Pilot plant (ii) Biological oxygen demand (iii) Effluent (iv) Process validation (v) Chemical hazards (5)
- 9) Write a note on Factory acceptance testing (FAT). (5)
- 10) Give any five importance of primary protective equipment (PPE). (5)

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1 Paper

Time: 06-May-2019 (02:00 PM - 05:00 PM)



MANIPAL ACADEMY OF HIGHER EDUCATION

Manipal Academy of Higher Education, Manipal MPharm Theory End-Semester Examinations.
Specialization: Industrial Pharmacy
MPharm Semester II - End Semester Examination May 2019
Date : 6/05/2019

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 principle and construction of Wurster Process with the help of diagram. (2 Marks + 8 Marks) (10)
- 2) (i) Explain the construction and working of rapid mixer granulator. (5 Marks) (10)
(ii) Discuss the coating process using Accela - Cota. (5 Marks)
- 3) Classify spray dryers. Explain any THREE types of atomization techniques used in spray dryers. (4 Marks + 6 Marks) (10)
- 4) Explain the sources of contamination in parenteral production with their preventive methods. (10)
- 5) Explain rotary die process for manufacture of soft gelatin capsules. (10)

SECTION - B

Answer all the questions.

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

- 6) Discuss the large-scale emulsification of immiscible liquid systems. (5)
- 7) Give layout of parenteral production unit. (5)
- 8) Write a note on glass as a packaging material. (5)
- 9) Enlist different grades of water. Explain two of them. (5)
- 10) Discuss the mechanism of air filtration systems. (5)

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Question Paper

Time: 08-May-2019 (02:00 PM - 05:00 PM)



MANIPAL ACADEMY OF HIGHER EDUCATION

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

MPharm Semester II - End Semester Examination, May 2019
Exam Date: 08-05-2019

Entrepreneurship Management [PMA-MIP204T]

Marks: 75

Duration: 180 mins.

SECTION - A

Answer all the questions.

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

- 1) Discuss in brief any 10 characteristics of an entrepreneur. (10)
- 2) Discuss types of enterprises. According to you which one is more apt for a start-up enterprise and why? (10)
- 3) Discuss strategies adopted by companies for their future growth. (10)
- 4) Discuss the importance of feedback, monitoring and evaluation for a success of an enterprise. (10)
- 5) Write in detail the resource mobilization for an enterprise. (10)

SECTION - B

Answer all the questions.

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

- 6) List and discuss the factors influencing industrial location. (5)
- 7) What is SWOT analysis? Discuss how it plays an important role in evaluating an enterprise. (5)
- 8) What is profitability analysis and controlling of an enterprise? Discuss. (5)
- 9) Discuss motivating factors. Add a note on any one model of motivation. (5)
- 10) Define Entrepreneurship. Add a note on brief history of Entrepreneurship. (5)

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Answer Key
Colts MFD