

Question Paper

Exam Date & Time: 11-May-2023 (02:00 PM - 05:00 PM)



MANIPAL ACADEMY OF HIGHER EDUCATION

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

Hazards and Safety Management [PQA-MQA201T -S1]

Marks: 75

Duration: 180 mins.

SECTION - A

Answer all the questions.

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

- 1) You have been asked to head a process hazard group of a synthetic chemistry R and D laboratory. (10)
Explain how will carry out this function.
- 2) Analyse the problems associated with natural resources. (10)
- 3) . a) Comment on the characteristics of air handling system. (10)
b) Comment on the air locks used in the manufacturing of parenteral and formulations containing toxic and poisonous chemicals. (5+5 marks)
- 4) Explain the hazards of drugs synthesis involving chlorinating, sulphonating and methylating agents (10)
- 5) Explain the techniques of accident prevention in pharmaceutical industry (10)

SECTION - B

Answer all the questions.

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

- 6) Manipal College of Pharmaceutical Sciences has a huge gas storage area. What precautions the college has/should have taken to prevent fire hazards in this area. (5)
- 7) Explain the reasons for water stress. (5)
- 8) Explain the potential uses of preliminary hazard analysis. (5)
- 9) Analyse the management of over exposure to chemicals. (5)
- 10) An industrial effluent containing the following impurities in microgram to nanogram concentration. (5)
Suggest a suitable analytical method for quantifying these with reason.
a) metallic impurities
b) drugs belong to weak acid class
c) drugs belong to weak acid class

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