

Question Paper

Exam Date & Time: 09-May-2018 (02:00 PM - 05:00 PM)



MANIPAL ACADEMY OF HIGHER EDUCATION

MANIPAL COLLEGE OF PHARMACEUTICAL SCIENCES

END SEMESTER THEORY EXAMINATIONS - MAY 2018

PROGRAM: MPHARM SEMESTER 2 (PHARMACEUTICAL CHEMISTRY)

DATE: 09/05/2018

TIME: 02:00 PM - 5:00 PM

Pharmaceutical Process Chemistry [PCH-MPC204T]

Marks: 50

Duration: 180 mins.

a

Answer all the questions.

Answer the following (5 marks x 8 = 40 marks)

- 1) Explain the principles of process green chemistry. (5)
- 2) Discuss in brief the process design reasons for selection of a solvent (5)
- 3) Explain the mechanism involved in the formation of crystals from a solution (5)
- 4) Discuss on the salt selection strategy in drug development (5)
- 5) Explain the kinetics and mechanism of aromatic nitration. (5)
- 6) What are the different types of halogenation? Explain. (5)
- 7) How complex formation modifies reagent reactivity? Explain. (5)
- 8) Explain the reduction reactions involving hydrogen transfer and metal hydrides (5)

b

Answer all the questions.

Answer the following with specific answers (2 marks x 5 = 10 marks)

- 9) What is Inclusion and Occlusion in crystallization? (2)
 - A)
 - B) What is process excellence index? Give its importance in process chemistry (2)

- C) What are the general steps involved in scale up operations? (2)
- D) Define reaction progress kinetic analysis. (2)
- E) What are the characteristics of cost-effective routes? (2)

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