

Exam Date & Time: 02-Jan-2019 (09:30 AM - 12:30 PM)



MANIPAL ACADEMY OF HIGHER EDUCATION

BPharm Semester III - End Semester Examination December 2018
Course Code: PCE-BP304T Course Title: Pharmaceutical Engineering
Date: 02-01-2019

Pharmaceutical Engineering [PCE-BP 304T]

Marks: 75

Duration: 180 mins.

II Long Answers

Answer all the questions.

- 1) a) Explain the various aspects of drying rate curve.
b) Explain the principle, construction and working of super centrifuge. (10)
- 2) Explain the factors which should be considered during selection of material for pharmaceutical plant construction. (10)

III Short Answers

Answer all the questions.

- 1) Explain the principle, construction and working of colloid mill. (5)
- 2) Discuss the construction and working of air separator. (5)
- 3) Explain Reynolds number and its significance. (5)
- 4) Write short notes on construction and working of sigma blade mixer. (5)
- 5) Explain the working of apparatus used in simple distillation process (5)
- 6) Describe the principle and construction of Climbing film evaporator (5)
- 7) Draw a neat and labelled diagram of a shell-and-tube heat exchanger and explain its construction. (5)

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Exam Date & Time: 04-Jan-2019 (09:30 AM - 12:30 PM)



MANIPAL ACADEMY OF HIGHER EDUCATION

BPharm - Semester -III

End Semester Examination, DECEMBER- 2018

Course Code: PCH-BP301T

Course Title: PHARMACEUTICAL ORGANIC CHEMISTRY-II (THEORY)

Date:04-01-2019

Pharmaceutical Organic Chemistry II [PCH-BP 301T]

Marks: 75

Duration: 180 mins.

II Long Answers

Answer all the questions.

- 1) Explain the following reactions of benzene with mechanism
 a) Nitration
 b) sulphonation
 c) halogenation
 d) Friedel craft's acylation. (10)
- 2) a) Define iodine value. Write the principle and procedure involved in the determination of iodine value with equations.
 b) What are oils and fats? Give their physical properties. 3 marks (10)

III Short Answers

Answer all the questions.

- 1) Explain the orbital picture of benzene with neat diagrams (5)
- 2) Discuss the basicity of amines. (5)
- 3) a) Give the resonance structures of Phenol (2 marks)
 b) Give the structure and uses of cresol and resorcinol (3 marks) (5)
- 4) Write one method of synthesis of anthracene and give three important reactions of anthracene. (5)
- 5) Explain angle strain and discuss Coulson and Moffitts modification (5)
- 6) Write two important reactions of cyclobutane and cyclopropane. (5)
- 7) Give one method of preparation diphenyl methane and triphenyl methane. (5)

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