

# Question Paper

Exam Date & Time: 04-Dec-2017 (02:00 PM - 05:00 PM)



## MANIPAL ACADEMY OF HIGHER EDUCATION

### MANIPAL COLLEGE OF PHARMACEUTICAL SCIENCES END SEMESTER THEORY EXAMINATIONS - NOVEMBER 2017

PROGRAM : MPHARM SEMESTER I

DATE : 04-12-2017

TIME : 2:00PM - 5:00PM

#### Chemistry of Natural Products [PCH-MPC104T]

Marks: 50

Duration: 180 mins.

**a**

**Answer all the questions.**

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

- 1) Explain the rationale used in the development of synthetic and semi synthetic analogues from Natural leads of Morphine and Quinine. (5)
- 2) Discuss the structural elucidation of Atropine. (5)
- 3) Enlist 4 enzymes used in organic synthesis and Explain the role of any two enzymes (5)
- 4) Explain the general structural elucidation for flavonoids. (5)
- 5) Classify Eicosonoids and mention their therapeutic implications. (5)
- 6) Explain the chemistry of sterols and cardiac glycosides. (5)
- 7) Explain protein engineering with suitable example. Write the steps involoved in PCR. (5)
- 8) Classify terpenoids with examples and discuss its isolation procedure. (5)

**b**

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

- 9) Write 2 structures of Macrolide antibiotics with their specific uses. (2)
  - A)
  - B) Give 2 structures of diterpenoids with their specific uses. (2)
  - C) Write the advantages of II, III and VI generation cephalosporins (2)

over I generation Cephalosporins with suitable examples

- D) Classify alkaloids with suitable examples . (2)
- E) Write salient features of sapogenin. (2)

-----End-----