

UG Odd Semester (CBCS) Exam., December—2016

PHARMACEUTICAL SCIENCE

(7th Semester)

Course No. : BPH-706 (C)

[Pharmaceutical Chemistry-VI (CNP)]

*Full Marks : 75**Pass Marks : 30**Time : 3 hours**The figures in the margin indicate full marks
for the questions*Answer **five** questions, taking **one**
from each Unit

UNIT—I

- Describe the application of IR, NMR and mass spectroscopy in the structural elucidation of organic compounds. 15
- What are enantiomers, diastereomers and plane of symmetry? Write a note on stereoisomers of camphor, ephedrine and menthol. (2×3)+(3×3)

UNIT—II

- What are cardiac glycosides? Give the structural framework of cardenolide and bufadienolide. Write down the sources of cardiac glycosides with examples. Discuss the pharmacological properties of cardiac glycosides and draw the structure of scillaren A. 5+4+6
- Briefly discuss the hydrolysis products of lanatoside A and C. How cardiac glycoside elicit its cardiac contractility activity? Write a note on the chemistry of digoxin. 5+4+6

UNIT—III

- Classify vitamins with examples. Elucidate the structure of vitamin A₁ or ascorbic acid. 5+10
- Classify alkaloids with examples of each chemical class. Discuss the chemistry involved in the structural elucidation of atropine or ephedrine. 5+10

UNIT—IV

- Elucidate the structure of penicillin. Briefly discuss the chemistry of streptomycin or tetracycline. 10+5

(3)

8. Classify flavonoids with structure and examples. Discuss the pharmacological properties and chemistry of quercetin. 5+10

UNIT—V

9. Classify terpenoids and write the general methods of isolation of mono and sesquiterpenes. Write a note on special isoprene rule. How the structural elucidation of menthol is undertaken? 6+4+5
10. Describe the structural elucidation of citral or camphor. 15

★ ★ ★