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

PHARMACEUTICAL SCIENCE

(5th Semester)

Course No. : BPH–505 (C)

**[Pharmaceutical Chemistry—V
(Medicinal Chemistry—I)]**

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

1. Define the terms isosterism and bioisosterism. Write in detail about various receptor theories for drug-receptor interaction.

2+2+11=15

2. Explain in short about Hammett equation. Deduce the mathematical equation for Hansch analysis. 3+12=15

(*Turn Over*)

UNIT—II

3. What do you mean by the term 'catecholamines'? Why are they called so? Write down the SAR of phenylethanolamine derivatives as adrenergic agonist. Outline the synthetic scheme for the preparation of adrenaline and salbutamol. 2+2+5+(3×2)=15

4. Define and classify cholinergic drugs with examples. Write down the SAR of acetylcholine derivatives as cholinergic drugs. Outline the synthetic scheme for the preparation of acetylcholine and carbachol.

2+3+4+(3×2)=15

UNIT—III

5. What are the different types of nitrogen present in a histamine molecule? Explain the term 'antihistaminic agent'. Write down its mechanism of action. Discuss in detail about the SAR of H_1-antihistaminic agents.

3+2+4+6=15

6. Outline the synthetic scheme of the following (any *five*) : 3×5=15

(a) Diphenhydramine

(b) Mepyramine

(*Continued*)

(**3**)

(c) Chlorpheniramine

(d) Promethazine

(e) Chlorcyclizine

(f) Ranitidine

UNIT—IV

7. Define the term 'eicosanoids'. Write in short about its occurrence, chemical nature and its application in medicine. 3+(4×3)=15

8. Explain the term 'analgesic-antipyretic'. Write down the synthetic scheme of any three drugs taking from different classes of analgesic antipyretic. 3+(4×3)=15

UNIT—V

9. Discuss in detail about the biosynthesis of PGH_2 and PGI_2. 7½×2=15

10. Discuss in detail about the occurrence, chemical nature and uses of ergot alkaloid. 5+7+3=15

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