B.Pharma.

(SEM. V) ODD SEMESTER THEORY EXAMINATION 2012-13

PHARMACEUTICAL CHEMISTRY—V
(MEDICINAL CHEMISTRY—I)

Time : 3 Hours  Total Marks : 80

Note : (1) Answer all questions.
        (2) All questions carry equal marks.

1. Attempt any FOUR of the following :  (4×4=16)
   (a) Biological activities are influenced by optical isomers. Illustrate your answer with suitable examples.
   (b) What is concept of Prodrug and give various application of Prodrug ?
   (c) Explain the role of hydrogen bonding and surface area in drug action.
   (d) What are the factors which govern drug action ?
   (e) What is Bioisosterism and give classification of Bioisosterism ?

2. Attempt any TWO of the following :  (8×2=16)
   (a) Classify adrenergic drug with suitable examples.
   (b) Give synthesis and uses of any FOUR of the following :
       (i) Neostigmine
       (ii) Methacholine
(iii) Atropine
(iv) Ephedrine
(v) Amphetamine.
(c) Give synthesis, nomenclature and uses of any TWO:
   (i) Salbutamol
   (ii) Adrenaline
   (iii) Terbutaline.

3. Answer any TWO of the following: (8×2=16)
   (a) Write the SAR of ester derivative of local anaesthetic.
   (b) Give the synthesis and uses of the following:
      (i) Levodopa
      (ii) Caffeine
      (iii) Nikethamide
      (iv) Valproic acid.
   (c) Comment on the type of the substitution at the 5th position in barbiturates and give synthesis of phenobarbitone.

4. Give synthesis and uses of any FOUR of the following: (4×4=16)
   (a) Phenobarbitone
   (b) Methadone
   (c) Pethidine
   (d) Ketamine
   (e) Lignocaine.

5. Answer any TWO of the following: (8×2=16)
   (a) Discuss the SAR of benzodiazepines.
   (b) Give the synthesis and uses of any FOUR of the following:
      (i) Imipramine
      (ii) Dicylomin
      (iii) Gallamine
      (iv) Diazepam
      (v) Mephensin.
   (c) Write the SAR of phenothiazines.