Sub Code:BOP351

Paper Id: 150516 Roll No:

B PHARM
(SEM-V) THEORY EXAMINATION 2019-20
PHARMACEUTICAL CHEMISTRY-VI (MEDICINAL CHEMISTRY-I)

Time: 3 Hours *Total Marks: 100*

Note: Attempt all Sections. If require any missing data; then choose suitably.

SECTION A

1. Attempt *all* questions in brief. 2 x 10 = 20

a. Define bio isosterism with suitable examples.
b. Give the synthesis of salbutamol.
c. Enlist the physicochemical parameters of drugs.
d. Give the mechanism of action of Ketamine.
e. What are antispasmodic drugs? Give the structure of dicylomine.
f. Give the biosynthesis of acetylcholine.
g. Explain the mechanism of action of pancuronium.
h. How side chain at C-5 in barbiturates affects is biological activity?
i. Differentiate between sedatives and hypnotics.
j. Give the mechanism of action and structure of amphetamine.

SECTION B

2. Attempt any *three* of the following: 10x3=30

a. What is optical isomerism? Explain the role of optical isomerism in biological activity of drugs. Justify your answer with different sets of examples.
b. What are cholinergic drugs? Classify with suitable examples. Explain mechanism of action, SAR and uses of acetylcholine.
c. What are opioid analgesics? Classify them with examples. Give the SAR, mechanism of action and uses of opioid analgesics.
d. What are anticonvulsants? Explain SAR, mechanism of action and uses of any two classes in detail.
e. What are antipsychotic drugs? Explain the classification with examples. Explain SAR, mechanism of action and uses of haloperidol.

SECTION C

3. Attempt any *one* part of the following: 10x1=10

a. What is prodrug? Give a detailed account on prodrug with suitable examples.
b. What are the forces involved in drug receptor interaction? Explain with examples.

4. Attempt any *one* part of the following: 10x1=10

a. What are adrenergic drugs? Explain its classification and mechanism of action with examples. Explain the SAR of noradrenaline.
b. Write a detailed note on anticholinesterases. Give the synthesis of neostigmine.

5. Attempt any *one* part of the following: 10x1=10

a. Explain the SAR of local anesthetics. Give the mechanism of action and uses of ester derivatives. Write the synthesis of benzocaine.
b. Write a detailed note on anti tussives. Give the mechanism of action, uses and synthesis of cramiphen.

6. Attempt any *one* part of the following: 10x1=10

a. What are sedative and hypnotics? Classify them with suitable examples. Give the SAR and synthesis of alprazolam.
b. Give the synthesis and mechanism of action of i) diazepam ii) levodopa iii) phenobarbitone iv) phenytoin

7. Attempt any *one* part of the following: 10x1=10

a. What are antidepressants? Write its detailed classification. Give the SAR, mechanism of action and uses of imipramine.
b. Give the synthesis and mechanism of action of i) amitriptyline ii) fluoxetine iii) chlorpromazine iv) caffeine.