22/04/2021

Total No. of printed pages = 3

MPC 103T

Roll No. of candidate | | | | | | | | | | |

2021

M.Pharm. 1st Semester End-Term Examination

ADVANCED MEDICINAL CHEMISTRY – I

(New Regulation)

Full Marks – 75 Time – Three hours

The figures in the margin indicate full marks for the questions.

Answer question No. 1 and any *seven* from the following.

1. (A) Multiple choice questions : (5 × 1 = 5)

(i) Which of the following is a H3 receptor blocker

(a) Pitolisant

(b) Ranitidine

(c) Cimatidine

(d) All of the above

(ii) Which one of the following is H1 receptor antagonist Ethylene diamine derivatives?

(a) Pyrilamine

(b) Diphenhydramine

(c) Pheneramine

(d) Promethazine

(iii) Which of the following NSAIDs has greater inhibitory selectivity for COX-1 than COX-2?

(a) Flurbiprofen

(b) Indomethacin

(c) Diclofenac

(d) Celecoxib

(iv) Which is a property of eicosanoids?

(a) All eicosanoids contain three conjugated double bonds

(b) All eicosanoids contain arachidonic acid and sphingosine

(c) Prostaglandins and leukotrienes both contain a ring structure

(d) Thromboxanes and prostaglandins both contain a carboxyl group

(v) Which of the following is GABA analogue?

(a) Progabide

(b) Diazepam

(c) Clonazepam

(d) Phenobarbital

2. Describe the stages of drug discovery in detailes. (10)

3. Classify receptors and discuss elaborately about G-Protein coupled receptor and Enzyme linked receptors. (2 + 4 + 4 = 10)

4. Write a note on Enzyme mimics and bio precursors. (5 + 5 = 10)

5. Give schematic illustration of the prodrug concept. Explain the application of Prodrug. (4 + 6 = 10)

6. Explain the role of chirality in selective and specific therapeutic agents. (10)

7. Discuss the chemistry of prostaglandins and thromboxanes. (5 + 5 = 10)

8. Define Analogue design of drug. Differentiate classical and non-classical Bioisosteres. Briefly discuss about Bioisosteric replacement. (1 + 3 + 6 = 10)

9. Write down the synthesis of following drugs : (any *five*) (5 × 2 = 10)

(a) Promethazine

(b) Prazosin

(c) Clonidine

(d) Hydralazine

(e) Diazepam

(f) 5-fluoro uracil

10. Explain the structure activity relationship of Hydantoins, Nitrogen mustards. Write a note on COX-I and COX-II inhibitors citing example with structure. (5 + 5 = 10)

11. Discuss the Peptidomimetic drug design principle. Write down the recent advances in peptidomimetics. (6 + 4 = 10)