Ref. No.: Ex/BP402T/2023

B.Pharm 2nd Year 2nd Semester Examination, 2023
Medicinal Chemistry (BP402T)

Full Marks-75 **Time- 3hrs**

Answer any *five questions* (At least *one* from each group)

Group-A

1. a) Define and classify sedative-hypnotic drugs with examples. [4]
   b) Discuss the SAR of barbiturates. [5]
   c) Draw the structures, chemical names and uses of diazepam, nitrazepam and chlorazepam. [6]
2. a) Define and classify anticonvulsants and major tranquilizers with examples. [5]
   b) Outline the synthetic schemes of thiopentone sodium, amobarbital sodium, pentobarbitone sodium and phenobarbitone sodium. [10]
3. a) What are the cardinal symptoms and pathophysiology of inflammations? [3]
   b) Define and classify nonsteroidal anti-inflammatory, analgesics and antipyretic drugs with examples. [4]
   c) Discuss the mode of action and SAR of indole acetic acid derivatives and salicylic acid derivatives. [8]
4. Outline the synthesis and chemical names of the following:
   Indomethacin, Tolmetin sodium, Ibuprofen, Nimesulide, phenylbutazone, mephenamic acid. [2.5. x 6 = 15]

Group-B

5. a) Discuss SAR of cholinergic drugs. [5]
   b) Outline the synthesis of the following:
   Pilocarpine, physostigmine [2.5 x 2 = 5]
   c) Write an account on natural nicotinic alkaloids. [5]
6. a) Write in detail about the biosynthesis and metabolism of catecholamines? [7]
   b) Discuss in detail about the SAR of imidazolines and α-adrenergic agonists. [8]
7. a) Discuss the SAR of selective β-blockers. [5]

[Turn over

b) Discuss the synthesis of the following:

Prazosin, clonidine [2.5 x 2 = 5]

c) Discuss the SAR of selective α_1-blockers. [5]

Group-C

8. Write about all physicochemical parameters responsible for drug absorption. [15]

9. Explain Phase I and Phase II metabolism with suitable examples. [15]