Roll No.....

B

2589

M.Sc. (Applied Chemistry) (Semester IV) EXAMINATION, 2018

Paper-M4AC18-ET-23A

PHARMACEUTICAL CHEMISTRY-I

Time allowed : Three hours

Maximum marks : 40

The question paper is divided into three parts, Part-A, Part-B and Part-C.

Part-A : (8 marks) is compulsory and contains 8 questions (20 words each). Each question is of one mark.

Part-B : (8 marks) is compulsory and contains four questions. Candidate is required to attempt all four questions. Each question is of two marks (50 words each).

Part-C : (24 marks) contains six questions two from each unit. Candidate is required to attempt three questions one from each unit. Each question is of 8 marks (400 words).

Part-A (Compulsory)

1. What is the induced fit theory of drug activity ? 1

2. Define the term ED-50. 1

3. What is pharmacokinetics ? 1

4. Define enzyme inhibition. 1

5. Draw the structure of Fluconazole and Norfloxacin. 1

6. Draw structures and also give name of two antibiotics having β lactum ring. 1

7. What is lipophilicity ? 1

8. Give any one synthesis of dapsone. 1

Part-B (Compulsory)

9. Discuss the concept of prodrug and soft drug. 2

10. Explain the Free-Wilson analysis. 2

11. Discuss membrane active drugs. 2

12. Discuss general modes of action of sulphonamides. 2

Part-C

Unit-I

13. Write short notes on the following :

    (i) Partition coefficient

    (ii) Occupancy theory

    (iii) Hansh anlysis

    (iv) Drug receptors 2×4

14. Explain the concept of lead compound and lead modification. 4+4

Unit-II

15. Write detail short notes on the following :

    (i) Biotransformation

    (ii) Drug metabolism 4+4

16. Explain important pharmacokinetic parameters in defining drug disposition and in therapeutics. 8

Unit-III

17. Give the synthesis of following drugs :

    (i) Isoniazid

    (ii) Chloroquin

    (iii) Amino salicyclic acid

    (iv) Ciprofloxacin 2×4

18. Write short notes on the following :

    (i) Cell wall biosynthesis

    (ii) Antibiotics inhibiting protein synthesis

    (iii) Synthesis of Cephalosporin

    (iv) Synthesis of Streptomycin 2×4