

Reg. No

Name

MSc DEGREE END SEMESTER EXAMINATION - MARCH 2020
SEMESTER 4 : PHARMACEUTICAL CHEMISTRY
COURSE : 16P4CPHT15EL : PHARMACEUTICAL CHEMISTRY - IV
(For Regular - 2018 Admission and Supplementary - 2017, 2016 Admissions)

Time : Three Hours

Max. Marks: 75

Section A**Answer any 10 (2 marks each)**

1. Define a lead compound.
2. Explain the method of linear regression analysis by least square method used in QSAR.
3. Describe Hammett equation. Explain the significance of the terms involved.
4. Define pharmacophore.
5. Give an idea about the drug receptor interactions.
6. Give examples for non-bead form supports in solid phase synthesis.
7. What are traceless anchors?
8. What are antimetabolites? Give different types of antimetabolites.
9. Suggest a synthetic route for Tamoxifen.
10. Give the structures of epinephrine and norepinephrine
11. Draw the structures of (a) nicotine and (b) atropine.
12. What is the major reason for Alzheimer's disease?
13. What are anxiolytic agents? Give two examples.

(2 x 10 = 20)

Section B**Answer any 5 (5 marks each)**

14. Illustrate various applications of prodrugs with suitable examples.
15. Explain the concept of functional group modification to increase the potency of a drug.
16. List out the advantages and disadvantages of QSAR
17. What are the statistical methods commonly used in QSAR?
18. Write briefly on PEG-grafted polystyrene as solid support in solid phase synthesis.
19. Write briefly on different amino and carboxyl protecting groups.
20. Give an account of ergot alkaloids
21. Explain the synthesis and mechanism of action of barbiturates.

(5 x 5 = 25)

Section C**Answer any 2 (15 marks each)**

22. Write short note on drug-likeness screening.
23. Give an account of the alkylating agents in cancer chemotherapy.
24. Give the structure, mechanism of action and synthesis of salbutamol, methoxamine and Phentolamine
25. Write short note on the mechanism behind the action of hypnotics and sedatives.

(15 x 2 = 30)