

Reg. No

Name

23P4030

M. Sc. DEGREE END SEMESTER EXAMINATION : MARCH 2023

SEMESTER 4 : PHARMACEUTICAL CHEMISTRY

COURSE : 21P4CPHT15EL : MEDICINAL CHEMISTRY

(For Regular - 2021 Admission)

Duration : Three Hours

Max. Weights: 30

PART A

Answer any 8 questions

Weight: 1

1. Phenobarbital is a less toxic anticonvulsant drug, why? (A, CO 2)
 2. Define Lipinski's rule (U, CO 1)
 3. Explain the pharmacological importance of acetylcholine esterase inhibitors. (U, CO 2)
 4. Explain Houghten's tea-bag synthesis. (U, CO 1)
 5. Give the mechanism of action of 6-mercaptopurine. (A, CO 2)
 6. How does atenolol differ from other beta blockers? (A, CO 2)
 7. What is a soft drug? Give an example. (R, CO 1)
 8. What are photolabile anchors? Give its significance. (A, CO 1)
 9. What are the applications of QSAR in drug design? (E, CO 1)
 10. Describe Hammett equation. Explain the significance of the terms involved. (R, CO 1)
- (1 x 8 = 8)**

PART B

Answer any 6 questions

Weights: 2

11. Give an account on high throughput screening of libraries. (A, CO 1)
 12. Discuss the different methods to assess drug likeness (A, CO 1)
 13. Write a brief note on different virtual screening techniques (A, CO 1)
 14. List out the advantages of CoMFA over traditional QSAR. (An, CO 1)
 15. Explain the different types of assays used in HTS. (U)
 16. Outline the synthesis of diazepam. (A, CO 3)
 17. Give the structure and mechanism of action of decamethonium and suxamethonium (A, CO 2)
 18. What do you mean by Taft's steric factor? Explain the parameters. (R, CO 1)
- (2 x 6 = 12)**

PART C

Answer any 2 questions

Weights: 5

19. Discuss in detail the uses of prodrugs (A, CO 1)
 20. Write a note on anticonvulsant drugs. Explain their structure, classification and mode of action. (A, CO 2)
 21. (a) Explain nicotinic and muscarinic receptors. (U, CO 2)
(b) Write the synthesis of carbachol.
 22. Briefly discuss the recent developments in cancer chemotherapy. (A, CO 2)
- (5 x 2 = 10)**

OBE: Questions to Course Outcome Mapping

CO	Course Outcome Description	CL	Questions	Total Wt.
CO 1	Explain the principles of drug design and development, QSAR, CADD and combinatorial chemistry.	U	2, 4, 7, 8, 9, 10, 11, 12, 13, 14, 18, 19	21
CO 2	Illustrate the structure and mechanism of actions of antineoplastic drugs, drugs acting on ANS and drug acting on CNS.	U	1, 3, 5, 6, 17, 20, 21, 22	21
CO 3	Explain the synthetic studies of different classes of drugs.	A	16	2

Cognitive Level (CL): Cr - CREATE; E - EVALUATE; An - ANALYZE; A - APPLY; U - UNDERSTAND; R - REMEMBER;