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M. Pharmacy 1st Semester Examination

Advanced Medicinal Chemistry

MP-212

Time : 3 Hours

Max. Marks : 90

The candidates shall limit their answers precisely within the answer-book (40 pages) issued to them and no supplementary/continuation sheet will be issued.

Note : Out of two very long questions, carrying 25 marks each only one need to be answered, out of 4 long questions carrying 10 marks each only three are to be answered and out of 9 short questions carrying 5 marks each only seven are to be answered.

1. Describe different phases of drug discovery. Differentiate between direct and indirect drug design. Enlist different sources of lead identification. Add a note on pharmacophore based drug design. **(25)**
2. Define the term hypertension. Classify anti-hypertensives with suitable examples. Discuss in detail molecular mechanism, SAR and uses of angiotensin receptor blockers. Why angiotensin receptor blockers are preferred over ACE inhibitors? **(25)**
3. Write objectives, advantages and disadvantages of QSAR. Discuss in detail method of calculation and importance of hydrophilic parameters (log P.). Add a note on Hanch analysis. **(10)**
4. Classify antineoplastics with suitable examples. Write mode of action and SAR of alkylating agents. **(10)**

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5. Describe following terms commonly used in QSAR:
(a) t-value (b) s-value (c) r^2 (d) r^2_{cv} (e) external test set validation. (10)
6. What do you understand by the term hyper-lipidemia? Classify antihyperlipidemics. Write mode of action and SAR of statins and fibrates. (10)
7. Write a note on HTS. (5)
8. Discuss importance of conformations in drug-target interaction. (5)
9. Give mode of action and SAR of opioids with special reference to morphine. (5)
10. Discuss concept and method of energy minimization. (5)
11. Write a note on structure based virtual screening. (5)
12. Write structures, mode of action and uses of topoisomerase I & II inhibitors. (5)
13. Discuss structures and physiological importance of prostaglandins in context of inflammation and gastric and secretion. (5)
14. Write a note on COMT inhibitors with special reference to parkinsonis disease. (5)
15. Write a note on immunostimulants. (5)