[Time: 3 Hours] [Max. Marks: 100]

MEDICINAL CHEMISTRY - II (Revised Scheme) O.P. CODE: 7923

Your answers should be specific to the questions asked. Draw neat labeled diagrams wherever necessary. Answer **FOUR** questions

LONG ESSAYS (ANSWER ANY FOUR)

4 X 25 = 100 Marks

- 1. a) Explain in detail the development of cardiovascular drugs using natural product as a lead molecule.
 - b) Explain phodophyllotoxin as a lead molecule in the development of clinically useful anticancer agents.
- 2. a) Explain the prodrug approaches to improve the parenteral administration and transdermal absorption of drugs.
 - b) Write the rationale and practical considerations in design of prodrugs.
- 3. Give detail account on chemistry, mechanism of action and therapeutic uses of inhibitors of DNA polymerase, DNA topoisomerases and DNA methyl transferase.
- 4. a) Explain in detail the types and therapeutic values of metal bound pharmaceuticals.
 - b) Explain the chemistry of protein containing porphyrins.
- 5. a) Explain the chemistry and mode of action of currently used oral antidiabetic agents.
 - b) Explain the chemistry and therapeutic values of enzyme inhibitor of carbohydrate metabolism.
- 6. Give a detail account on drug resistance, types and mechanism of drug resistance and approaches to combat drug resistance in bacteria.

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