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

MEDICINAL CHEMISTRY - II (Revised Scheme) Q.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)

 $4 \times 25 = 100 \text{ Marks}$

- 1. a) Explain the mechanism of action and chemical modifications in the development of extended spectrum of cephalosporins.
 - b) Explain the chemistry and mechanism of action of carbapanems.
- 2. a) Explain the chemistry and therapeutic values of enzyme inhibitors of carbohydrate metabolism.
 - b) Give an account on chemistry, distribution and therapeutic values of enkephalins.
- 3. Give detail account on discovery of drug prototypes and their derivatives by perceived effect of chemicals, observations during routine laboratory studies and unanticipated consequences of therapy with appropriate examples for each.
- 4. a) Explain phodophyllotoxin as a lead molecule in the development of clinically useful anticancer agents.
 - b) Explain in detail the development of new and better analgesics using morphine as a lead molecule.
- 5. a) Outline the rationale and practical consideration in design of prodrugs.
 - b) Explain in detail the types and nature of chemical bonds involved in prodrug design.
- 6. Give detail account on chemistry, mechanism of action and therapeutic uses of inhibitors of DNA polymerase, DNA topoisomerases and DNA methyl transferees.

