

M Pharm Part I Degree Examinations – June 2012**(Pharmaceutical Chemistry)****Paper II - Advanced Medicinal Chemistry**

Time : 3 hrs

Maximum Marks: 100

- *Answer all questions*
- *Draw diagrams wherever necessary*

Essays:**(2x20 =40)**

1. Define 'Diuretics'. Classify them with any two examples from each class. Discuss the structure-activity relationships of thiazide and thiazide like diuretics. Outline the synthesis of 'furosemide' and 'ethacrynic acid'.
2. What are 'anti-convulsants'. Classify them with examples. Discuss their mechanism of action. Explain the structure-activity relationships of benzodiazepines. Outline the synthesis of pentobarbital and diazepam.

Short Essays:**(6x10=60)**

3. What are anti-hyperlipidemic agents. Classify with examples. Discuss the mechanism of action and synthesis of clofibrate.
4. Explain the structural activity relationship of adrenergic drugs citing examples with structures. Outline the synthesis of adrenaline.
5. Discuss the mechanism of action of alkylating agents and antimetabolites as anti-neoplastic agents.
6. What are cholinergic blocking agents. Discuss how synthetic cholinergic blocking agents act. Outline the synthesis of any one agent.
7. Discuss the chemistry, structure activity relationships and medicinal uses of fluoro-quinoline antibacterials.
8. Discuss the application of gene therapy in the treatment of cancer. Add a note on the plant products utility as anticancer agents.
