



(Following Paper ID and Roll No. to be filled in your Answer Book)

**PAPER ID : 150607**

Roll No.

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### B. Pharm.

(SEM. VI) THEORY EXAMINATION, 2014-15  
**PHARMACEUTICAL CHEMISTRY - VI**  
**(MEDICINAL CHEMISTRY - II)**

Time : 3 Hours]

[Total Marks : 80

**1 Answer any two of the following: (8×2=16)**

- a) Define pharmacophore and discuss the methods of discovery and optimization of pharmacophore.
- b) Define drug design. Discuss its role in computer aided drug design (CADD).
- c) Define QSAR. Discuss in detail about steric parameter  $s$  and Taft's steric parameter.

**2 Answer any four of the following: (4×4=16)**

- a) Write about chemistry and positive inotropic effect of cardiac glycosides.
- b) Discuss the chemical classification of Anti-Hypertensive drugs with suitable examples.

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- c) Give the synthesis and SAR of  $\beta$ -adrenergic blockers.
- d) Give the synthesis and mechanism of action of Warfarin sodium.
- e) Write the SAR and synthesis of Nifedipine.

**3 Answer any two of the following: (8×2=16)**

- a) Give the chemical classification of H1 Antagonist. Discuss in detail the SAR of H1 Antagonist with suitable examples.
- b) Write the detailed synthesis and uses of Ranitidine and Famotidine.
- c) Give the synthesis and mechanism of action of any two:
  - i) Methotrexate
  - ii) 6-Mercaptopurine
  - iii) 5-Fluorouracil

**4 Answer any four of the following : (4×4=16)**

- a) Explain the SAR and mechanism of action of Sulfonamides.
- b) Discuss the synthesis and uses of Sulphamethoxazole and Nalidixic acid.
- c) Define NSAIDs and discuss the chemical classification with suitable examples.
- d) Discuss the synthesis and uses of Mefenamic acid and Diclofenac sodium.
- e) Discuss the mechanism of action of NSAIDs.

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5 Answer any four of the following: (4×4=16)

- a) Discuss the mechanism of urine formation in a nephron.
- b) Give the chemical classification and uses of diuretics with suitable examples.
- c) Write a short note on High Ceiling Diuretics.
- d) Write the mechanism of action of Potassium Sparing Diuretics.
- e) Classify diagnostic aid. Give the synthesis of Iopanoic acid

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