



Roll No.

Total No. of Pages : 02

Total No. of Questions : 13

B.Pharma (2017 Batch) (Sem.-4)

**MEDICINAL CHEMISTRY-I**

Subject Code : BP-402T

M.Code : 75844

Time : 3 Hrs.

Max. Marks : 75

**INSTRUCTIONS TO CANDIDATES :**

1. SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.
2. SECTION-B contains THREE questions carrying TEN marks each and student has to attempt any TWO questions.
3. SECTION-C contains NINE questions carrying FIVE marks each and student has to attempt any SEVEN questions.

**SECTION-A**

**1. Answer briefly :**

- a) Give structures of **any two** direct cholinesterase inhibitors.
- b) Enumerate the biosynthetic pathway of acetylcholine.
- c) What is the significance of pKa value in drug action?
- d) Give mechanism of action of halothane.
- e) What do you understand by isosteric replacement?
- f) Give synthesis of phenylephrine.
- g) Write the structure and uses of salbutamol.
- h) Give structure and chemical name of **any one**  $\beta$ 1-blocker.
- i) Write down an example of benzodiazepine acting as antiepileptic agent.
- j) Justify "*the effect of geometrical isomerism on biological activity*".



## SECTION-B

- Classify NSAIDs with examples. Give a detailed account on phenylpropionic acid derivatives.
- Outline the synthetic schemes of the following drugs :
  - Phenytoin
  - Dicyclomine
  - Carbachol
  - Carbamazepine
- Write a detailed account on Phase I metabolic reactions with appropriate examples.

## SECTION-C

- Give the salient chemical features and nomenclature of benzomorphan based opioids.
- "Conformational isomerism leads to multiple modes of biological actions". Justify.
- Comment upon irreversible cholinesterase inhibitors.
- Write down the SAR of phenothiazine class of antipsychotic agents.
- Classify antiepileptic agents giving at least two examples from each class.
- Give structure, chemical name, mechanism of action and therapeutic uses of propranolol.
- Comment upon cardioselective  $\beta$ -blockers.
- Discuss SAR of barbituric acid derivatives.
- Outline the biosynthesis and metabolism of adrenaline.

**NOTE : Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the Student.**