

**T.Y.B.PHARM. SEMESTER-VI (2011 COURSE) : SUMMER -  
2018**

**SUBJECT : MEDICINAL CHEMISTRY – II**

Day : **Friday**  
Date : **20/04/2018**

**S-2018-3970**

Time : **10.00 AM TO 01.00 PM**  
Max. Marks : **80**

**N.B.**

- 1) **Q.1** and **Q.5** are **COMPULSORY**. Out of the remaining, attempt any **TWO** questions from Section – I and any **TWO** questions from Section – II.
- 2) Figures to the right indicate **FULL** marks.
- 3) Draw diagrams, structures and give reactions wherever necessary.

**SECTION – I**

- Q.1** Attempt any **FIVE** questions of the following: (10)
- a) Outline synthesis of Phenobarbital sodium.
  - b) Draw structures of any two short acting barbiturates.
  - c) Explain mode of action of benzodiazepines.
  - d) Explain the terms Grand mal and Petit mal epilepsy.
  - e) List of characteristic features of Phase – II metabolic reactions.
  - f) Give any four major uses of Sedatives-Hypnotics.
  - g) Draw structures of any two halogen containing hydrocarbons from general anesthetic category.
- Q.2** What is the goal of metabolism? Explain two main types of metabolic reactions. (05)  
Describe oxidation pathways for Carbon-Heteroatom systems giving with examples. (10)
- Q.3** a) Classify Sedatives and Hypnotics giving one representative structure for each class. (05)  
b) Discuss SAR of barbiturates. (05)  
c) Add a note on nonbarbiturates. (05)
- Q.4** Write short notes on any **THREE**: (15)
- a) Theories of general anesthesia
  - b) Classification and chemistry of anticonvulsants
  - c) Acetylation and Methylation
  - d) Factors affecting metabolism
  - e) Hallucinogens

**SECTION – II**

- Q.5** Attempt any **FIVE** questions of the following: (10)
- a) Give the structures of 2 natural compounds from which local anesthetics were designed.
  - b) Write synthesis of Lignocaine.
  - c) Draw any two structures of benzodiazepine class of anxiolytics.
  - d) Explain what do you mean by EPS?
  - e) Draw any two structures of Tricyclic antidepressants.
  - f) Draw the structures of products of partial hydrolysis of cocaine.
  - g) Outline the synthesis of Benzocaine.
- Q.6** a) Classify psychotherapeutic drugs with example. Give mode of action and SAR phenothiazines. (10)  
b) Describe in short local anaesthetic agents from ester category. (05)
- Q.7** a) Classify prodrugs with examples explaining each term. (08)  
b) Explain pharmacokinetic applications of prodrugs. (07)
- Q.8** Write short notes on any **THREE**: (15)
- a) Tricyclic antidepressants
  - b) Anxiolytics
  - c) Mode of action of local anesthetics
  - d) Outline synthesis of Imipramine and Diazepam
  - e) Outline synthesis of Chlorpromazine and Haloperidol