

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

SUBJECT : MEDICINAL CHEMISTRY – I

Day : **Saturday**
Date : **21/04/2018**

S-2018-3963

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

N. B. :

- 1) **Q. No. 1 and Q.No.5 are COMPULSORY.** Out of remaining solve any **TWO** questions each from **Section – I** and **Section – II**.
 - 2) Answers to both the sections should be written in the **SEPARATE** answer books.
 - 3) Figures to the right indicate **FULL** marks.
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SECTION – I

- Q.1** Solve **Any FIVE** of the following : **(10)**
- a) Define agonist and antagonist
 - b) Draw the structure of first neurotransmitter.
 - c) Write scheme of synthesis of carbachol or buthenechol.
 - d) Write about the effect of partition coefficient on drug action.
 - e) Enlist important uses of neuromuscular blockers.
 - f) List out drawbacks of Ach as a therapeutic agent.
 - g) Explain importance of conformational isomerism in drug action.
- Q.2** a) Classify ganglionic agents with a note on neuromuscular nerve transmission. **(10)**
Discuss uses of antimuscarinics with its mode of action.
- b) Discuss SAR of Cholinergic agents. **(05)**
- Q.3** a) What are the various physicochemical parameters that must be considered while designing of medicinal agents? Elaborate on the stereochemical aspects in detail. **(10)**
- b) Discuss biosynthesis, storage, metabolism of Ach. **(05)**
- Q.4** Write short notes on **Any THREE** of the following : **(15)**
- a) Stereochemistry and biological action
 - b) Classification of antimuscarinics with structure
 - c) Irreversible anticholinesterases
 - d) Outline synthesis of Gallamine and Mecamylamine
 - e) Papaverine alkaloids and their synthetic analogue

P.T.O.

SECTION - II

- Q.5** Outline synthesis of **Any FIVE** drugs of the following : (10)
- a) Guanethedine sulphate
 - b) Salbutamol
 - c) Prazocin
 - d) Acetazolamide
 - e) Terbutaline
 - f) Methyldopa
 - g) Isoproterenol
- Q.6** a) Classify diuretics with examples and explain mode of action of carbonic anhydrase inhibitors. (10)
- b) Discuss Chemistry of cardiac glycosides. (05)
- Q.7** a) Classify cardiotonics with examples and explain in detail about chemistry of cardenolides with mode of action of cardiotonics. (10)
- b) Outline biosynthesis of nor-adrenaline through chemical reactions. (05)
- Q.8** Write short notes on **Any THREE** of the following : (15)
- a) Purines and related heterocyclics
 - b) Mercurial diuretics
 - c) Direct sympathomimetics
 - d) Antianginals
 - e) Combination antihypertensive therapy

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