

UKA TARSADIA UNIVERSITY

M. Pharm (Pharmacology)(1stSemester)

Subject: 040050102- Cellular and Molecular Pharmacology

Time : 2.30 pm to 5.30 pm

Duration: 3 Hours

Date : 21/05/2014

Max. Marks: 70.

Instructions:

1. Attempt all questions.
2. Write each section in a separate answer book.
3. Make suitable assumptions wherever necessary.
4. Figures to the right indicate full marks allocated to that question.
5. Draw diagrams/figures whenever necessary.

Section 1

- Q-1 A. Explain the terms potency, efficacy and antagonism with suitable graphical representation. [05]

Or

- A. What is necrosis? Describe various types of necrosis with suitable examples.
- B. Describe various apoptotic pathways. Explain its importance in normal physiology of body. [06]

- Q-2 A. Describe structure and components of ion channel receptors. Explain functioning of Nicotinic cholinergic receptor. [06]

Or

- A. Describe types of adrenergic receptors along with their locations and pharmacological actions.
- B. Explain the adaptive cellular and molecular responses in brain ageing. Enlist the antiageing drugs. [06]

- Q-3 Answer any **TWO** [12]

- A. Describe the following terminologies using dose response curve along with its significance.
(i) Threshold (ii) Drug Potency (iii) Ceiling effect
- B. Give brief note on Muscarinic receptors- location, type, signal transduction and agonist-antagonists.
- C. Differentiate between:
i) Nuclear receptor and tyrosine kinase receptor
ii) Ligand gated ion channel and voltage gated ion channel

Section 2

- Q-4 A. Describe the clinical condition in which nitric oxide plays a significant role. [05]

Or

- A. Explain the role of PAF with mechanism.
- B. Compare characteristics of various vectors for gene insertion in gene therapy [06]

Q-5 A. Describe endothelin receptors along with location and pharmacological actions. [06]

Or

A. How GABA plays role in inhibitory post synaptic potential? How these actions can be modulated?

B. Describe the physiological role of various types of calcium channels. [06]

Q-6 Answer any **TWO** [12]

A. Write a note on peptide and its antagonist as drugs.

B. Describe role of Cytokines in various immunological and inflammatory disorders.

C. Describe briefly the source, formation, metabolism, inactivation and actions of Bradykinin.