

**Total No. of Pages : 02**

**Total No. of Questions : 10**

**M.Sc.(Clinical Research) (2018 Batch) (Sem.-1)**

## PHARMACOLOGY

**Subject Code : MSCR-103-18**

**Paper ID : [75607]**

**Time : 3 Hrs.**

**Max. Marks : 70**

**INSTRUCTIONS TO CANDIDATES :**

1. **SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.**
2. **SECTION-B contains FIVE questions carrying FIVE marks each and students have to attempt any FOUR questions.**
3. **SECTION-C contains FOUR questions carrying TEN marks each and students have to attempt any THREE questions.**

## SECTION-A

**1. Answer briefly :**

- a. Define receptors.
- b. What are second messengers? Give examples.
- c. What is LD50?
- d. What are acute and sub-acute toxicity studies?
- e. Name four animal models of depression.
- f. Name four animal models of hypertension.
- g. Name selective beta blockers.
- h. What is therapeutic drug monitoring?
- i. What is the effect of cholinergic system on cardiovascular system?
- j. What is teratogenicity and mutagenicity?

### SECTION-B

2. Explain synergism, antagonism and additive effects of drugs.
3. How chronic toxicity studies are conducted?
4. Explain the animal models of insulin dependent diabetes.
5. Write a note on different types of adverse drug reaction.
6. What are the effects of adrenergic system on heart, blood vessels and smooth muscle?

### SECTION-C

7. Write a note on different animal models of Alzheimer disease.
8. Write a note on different types of bioassays.
9. What is signal transduction? Write a note on different types of signaling transduction pathways.
10. What is neurohumoral transmission? What are different steps involved in it? What are different types of neurotransmitters? Give examples.