



**NC-02010307**      Seat No. \_\_\_\_\_

**M. Pharm. (Pharmacology) (Sem. I) (CBCS)  
Examination**

**January – 2017**

**Cellular & Molecular Pharmacology**

Time : 3 Hours]

[Total Marks : 80

- Instructions :** (1) Attempt any three questions from each section.  
(2) Questions 1 and 5 are compulsory.  
(3) Draw clean diagrams wherever necessary and tie each section separately.  
(4) Figure to the right indicates full marks for the respective question.

**SECTION – I**

- 1** Answer any **Seven** questions from the following : **14**
- (1) Write the principle of Southern blotting technique.
  - (2) Classify the main four receptors.
  - (3) Describe the use of Oxymetazoline and Prazocin.
  - (4) Describe the mechanism of action of Pilocarpine.
  - (5) Write the name of various drugs acting on sodium channels.
  - (6) Define Monoclonal antibodies.
  - (7) Enlist the drugs acting on Leucotrienes.
  - (8) Write the drugs acting on GABA receptors.
  - (9) Write a short note on Misoprostol.
  - (10) Uses of Southern blot technique.
- 2** Answer the followings :
- (A) Write the structure and role of NMDA receptor **7**  
in various diseases.
  - (B) Explain in detail about Western blot technique. **6**

- 3** Answer the followings :
- (A) Write a short note on Pharmacogenetics and role in cardiovascular and lipid disorders. **7**
- (B) Classify Histamine receptor antagonist. Write the physiological role of Histamine in our body. **6**

- 4** Answer the followings :
- (A) Explain in detail about process and applications of PCR techniques. **7**
- (B) Write the cellular and molecular pharmacology of Apoptosis. **6**

### SECTION – II

- 5** Answer any TWO questions from the following : **14**
- (1) Write a note on Physiological role of Prostaglandins in body and drugs acting on it.
- (2) Radio ligand binding assay.
- (3) Classify Dopamine receptors. Write the signal transduction and drugs acting on Dopamine receptors.

- 6** Answer the followings :
- (A) Explain in detail about role of nitric oxide in hypertension and Angina. **7**
- (B) Write a note on stem cells as therapeutic agent. **6**

- 7** Answer the followings :
- (A) Write a detailed note on Endothelin receptors. **7**
- (B) Classify adrenergic receptors. Write the signal transduction mechanism of beta receptors. **6**

- 8** Answer the followings :
- (A) Explain synthesis and applications of Monoclonal antibodies. **7**
- (B) Write a note on Cytokines and Interferons. **6**