

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY

M. Pharm. IST Semester Examination – June- 2011

Subject code:910103

Subject Name: Cellular & Molecular Pharmacology

Date:22/06/2011

Time: 10:30 am – 01:30 pm

Total Marks: 80

Instructions:

1. Attempt any five questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

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|-------------|-----|--|-----------|
| Q.1 | (a) | Describe molecular structure of ion channels. Write types and modulators of potassium channels. | 08 |
| | (b) | Classify different types of drug antagonism. Explain non-competitive antagonism. | 04 |
| | (c) | Comment on "Peptides are bad drugs". | 04 |
| Q.2 | (a) | Explain transport mechanisms across the cell membrane. | 07 |
| | (b) | Differentiate between partial and inverse agonists. | 05 |
| | (c) | Write a note on the relationship between receptor and disease. | 04 |
| Q.3 | (a) | Discuss signal transduction mechanisms by GPCR. | 07 |
| | (b) | Write a note on nuclear receptors. | 05 |
| | (c) | Write a note on apoptosis. | 04 |
| Q.4 | (a) | Discuss the role of stress in neurological disorders. | 06 |
| | (b) | Describe pharmacotherapeutics of dopamine receptors. | 05 |
| | (c) | Describe radioligand binding techniques. | 05 |
| Q.5 | (a) | Enlist excitatory amino acid receptors. Give an account of NMDA receptors. | 06 |
| | (b) | Write a note on cytokines. | 05 |
| | (c) | Discuss applications of gene therapy. | 05 |
| Q. 6 | (a) | Describe pharmacology of sodium channels with suitable modulators. | 06 |
| | (b) | Discuss synthesis and physiological functions of nitric oxide. | 05 |
| | (c) | Give an account of endothelins. | 05 |
| Q.7 | (a) | Give classification of adrenoceptors and their main effects giving selective agonists and antagonists. | 06 |
| | (b) | Discuss physiology of serotonin. | 05 |
| | (c) | Write a note on purines. | 05 |
