

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY
M.Pharm Semester –I Examination Feb. - 2012

Subject code: 910103

Date: 13/02/2012

Subject Name: Cellular and Molecular Pharmacology

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) Classify nicotinic acetylcholine receptor subtypes with reference to their location, membrane response and their agonists-antagonists. | 06 |
| | (b) Write on various theories of drug –receptor interaction | 05 |
| | (c) What is apoptosis? Describe the process of apoptosis and its involvement in pathophysiology of Cancer | 05 |
| Q.2 | (a) Classify adrenergic receptor subtypes. Enumerate their agonists and antagonists. | 06 |
| | (b) Write on pharmacology of peptides | 05 |
| | (c) Describe the role of nitric oxide in pathophysiology of various diseases. | 05 |
| Q.3 | (a) Discuss in detail about G-protein coupled receptors. | 06 |
| | (b) What is gene therapy? Describe gene therapy in brief. | 05 |
| | (c) Write on pharmacology of sodium channels and their modulators. | 05 |
| Q.4 | (a) Describe various transport mechanism across the cell membrane. | 06 |
| | (b) Give an account of Dopamine receptors in the CNS | 05 |
| | (c) Explain the mechanism of receptor malfunction leading to diseases like epilepsy, hypertension and myasthenia gravis. | 05 |
| Q.5 | (a) Classify 5-HT receptor subtypes with reference to their signal transduction, location and their agonists and antagonists. | 06 |
| | (b) Describe the role of cytokines in various immunological and inflammatory disorders. | 05 |
| | (c) Write on: neurochemistry of aging and anti-aging drugs. | 05 |
| Q. 6 | (a) What are prostanoids? Explain their role in inflammation. | 06 |
| | (b) Describe the structure of kinase linked receptors. Explain the signal transduction mechanism involved. | 05 |
| | (c) Write on pharmacology of potassium channels. | 05 |
| Q.7 | (a) Write on Endothelin receptors | 06 |
| | (b) Write on “Radio- ligand binding studies. | 05 |
| | (c) Classify GABA subtype receptors, giving emphasis on their location, signal transduction and their agonists –antagonists. | 05 |
