

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY
M. PHARM – SEMESTER – I • EXAMINATION – SUMMER -2018

Subject Code: MPL104T**Date: 09/05/2018****Subject Name: Cellular and Molecular Pharmacology****Time: 02:30PM TO 05:30PM****Total Marks: 80****Instructions:**

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

- | | | |
|-------------|--|-----------|
| Q.1 | (a) Describe in detail types of cell cultures and general methods to perform it | 06 |
| | (b) Explain various types of gene transfer techniques and its clinical applications | 05 |
| | (c) Describe mechanisms associated with ligand gated ion channel receptor | 05 |
| Q.2 | (a) Explain Gene mapping. Discuss in brief linkage analysis technique | 06 |
| | (b) Describe the importance of SiRNA and MiRNA | 05 |
| | (c) Write a short note on biosimilars | 05 |
| Q.3 | (a) Describe Structure and functions of cell and its organelles. Discuss Genome organization | 06 |
| | (b) Explain in brief concept of cryopreservation | 05 |
| | (c) Write a short note on various types of immunotherapies | 05 |
| Q.4 | (a) Write in detail about Proteomics science and its application in genomics | 06 |
| | (b) Discuss intrinsic and extrinsic pathways of apoptosis | 05 |
| | (c) Explain in brief DNA recombinant technology and Write applications of it | 05 |
| Q.5 | (a) Define cell division cycle. Describe various phases of cell cycle in detail | 06 |
| | (b) Explain in brief genetic variations in GPCR & its associated diseases | 05 |
| | (c) Write in detail about ELISA and Western blotting techniques | 05 |
| Q. 6 | (a) Classify Receptors. Explain G-protein coupled receptor in detail | 06 |
| | (b) Explain PCR and write its clinical applications in genomics | 05 |
| | (c) Write principle and application of cell viability assay | 05 |
| Q.7 | (a) Elaborate cyclic AMP signaling pathway & STAT signaling pathway | 06 |
| | (b) Give comment on genetic polymorphism affects drug metabolism | 05 |
| | (c) Write a short note on DNA electrophoresis | 05 |
