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## M.Pharmacy (Pharmacology) (2017 & Onwards) (Sem.-1) CELLULAR & MOLECULAR PHARMACOLOGY

Subject Code : MPL-104T M.Code : 74678

Time: 3 Hrs. Max. Marks: 75

## **INSTRUCTIONS TO CANDIDATES:**

- 1. Attempt any FIVE questions out of SIX questions.
- 2. Each question carry FIFTEEN marks.
- 1. Define gene expression. Explain its regulation. Discuss the importance of microRNA, gene mapping and gene sequencing.
- 2. a. Write in brief note on genome organization.
  - b. What are the regulators of cell death? Explain the intrinsic and extrinsic pathways of apoptosis.
- 3. a. Write a note on tyrosine kinase receptors.
  - b. Explain the following signaling pathways:
    - a. MAPK signaling
    - b. cAMP signaling pathway
- 4. a. Explain the principle and applications of PCR.
  - b. Describe Western Blotting.
- 5. a. What are the various types of vectors used in recombinant DNA technology? Explain.
  - b. What is gene therapy? Explain different techniques used for transferring the genes.
- 6. a. Write the applications of proteomics.
  - b. What is the principle of cell viability assays? Explain glucose uptake assay. Write the applications of cell viability assays.

NOTE: Disclosure of Identity by writing Mobile No. or Marking of passing request on any paper of Answer Sheet will lead to UMC against the Student.

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