

FACULTY OF PHARMACY**M. Pharmacy (Pharmacology) I – Semester (PCI) (Suppl.) Examination, Aug. 2019****Subject: Cellular and Molecular Pharmacology****Time: 3 Hrs****Max. Marks: 75****Note: Answer any five questions. All questions carry equal marks.**

1. a) Write a note on cell death, intrinsic and extrinsic pathways of apoptosis. 8M
b) Explain in detail necrosis and autophagy. 7M
2. a) What do you understand about intercellular cell signaling? 8M
b) Write descriptive notes on tyrosine kinase and G-protein coupled receptors. 7M
3. Explain in detail various types of gene transfer techniques with its clinical application.
Write about recent advances in gene therapy. 15M
4. a) Write a note on ELISA and western blotting techniques. 8M
b) What do you understand about recombinant DNA technology? 7M
5. a) Write a note on genetic variation in G protein coupled receptors. 8M
b) Explain in detail genomics and proteomics. 7M
6. a) Explain basic principle involved in recombinant DNA technology. 8M
b) How polymorphism of drug affects the metabolism. 7M
7. a) Write a descriptive note on immunotherapeutics. 8M
b) Explain various types of cell culture techniques. 7M
8. a) Write a note on principle and application of flow cytometry. 8M
b) Write notes on cryopreservation. 7M
