

**FACULTY OF PHARMACY**

**M. Pharmacy (Pharmacology) I – Semester (PCI) (Main & Backlog) Examination,  
February 2019**

**Subject: Cellular and Molecular Pharmacology**

**Time: 3 Hrs**

**Max. Marks: 75**

**Note: Answer any five questions. All questions carry equal marks.**

- |   |   |    |
|---|---|----|
| 1 | a) Explain structure and function of cell organelles and genome organization.                       | 8  |
|   | b) Explain how cell cycle will be regulated?  | 7  |
| 2 | a) What do y understand abt secondary messenger?  | 8  |
|   | b) Write descriptive notes on tyrosine kinase and nuclear receptors.                                | 7  |
| 3 | Explain in detail varis types of intracellular signaling pathways (Cyclic AMP, MAOK, JAK and STAT). | 15 |
| 4 | a) Write a note on principle and application of genomic tools.                                      | 8  |
|   | b) What do y understand abt DNA electrophoresis?  | 7  |
| 5 | a) Write a note on gene mapping and cloning of disease gene.  | 8  |
|   | b) Write a note on metabolomics and proteomics.   | 7  |
| 6 | a) Explain in detail varis types of gene transfer techniques.                                       | 8  |
|   | b) Write a descriptive note on gene sequencing and micro array technique.                           | 7  |
| 7 | a) Write a descriptive note on glucose uptake and calcium influx assay.                             | 8  |
|   | b) Explain varis types of cell culture techniques.  | 7  |
| 8 | a) Write a note on principle and application of varis cell viability assays.                        | 10 |
|   | b) Write a note on Biosimilars.   | 5  |

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