

Code No. 3599 / CBCS / Non-CBCS

FACULTY OF SCIENCE**M.Sc. III - Semester (CBCS / Non-CBCS) Examination, December 2014****Subject: Biochemistry****Paper - IV: Cell - Cell Communication and Signal Transduction****Time: 3 Hours****Max. Marks: 80**

**Note: Answer all questions from Part - A and Part - B.
Each question carries 4 marks in Part - A and 12 marks in Part - B.**

**PART – A (8 x 4 = 32 Marks)
(Short Answer Type)**

- 1 Membrane Transport process
- 2 Monomeric G-proteins and their role
- 3 Write note on VEGF, IGF.
- 4 Calmodulin
- 5 Retinoblastoma and colon cancer
- 6 BRCA and breast cancer
- 7 Chemotaxis
- 8 Abiotic stress signaling in plants

**PART – B (4 x 12 = 48 Marks)
(Essay Answer Type)**

- 9 (a) Give a detailed account on drugs targeting signaling molecules.
OR
(b) Explain the voltage and ligand gated channels. Add a note on Ionophores.
- 10 (a) Write notes on:
(i) Acylation
(ii) Glycosylation
(iii) Myristoylation
OR
(b) Explain the events of Tyrosine kinase receptors functioning.
- 11 (a) What is an oncogene? Explain the modes of action of different oncogenes.
OR
(b) Explain the discovery of Tumor suppressor genes. Add a note on p²¹ and PTEN.
- 12 (a) Explain the signaling mechanism in yeast.
OR
(b) Describe the signaling components in bacteria. Add a note on protein kinases in bacteria.
