



B.TECH DEGREE EXAMINATIONS: MAY 2015

(Regulation 2013)

Third Semester

BIOTECHNOLOGY

U13BTT304:Cell Biology

Time: Three Hours

Maximum Marks: 100

Answer all the Questions:-

PART A (10 x 1 = 10 Marks)

- Extra nuclear DNA is found in
 - chloroplast
 - endoplasmic reticulum
 - ribosomes
 - nucleus
- Mitochondria was first discovered by _____
- Cell fractionation is the most appropriate procedure for preparing which of the following
 - isolated cells from their tight neighbouring cells
 - isolated organelles
 - basic macromolecules
 - bone and other similar cells
- The light emitted as side scatter (SSc) measures _____
- Which of the following membrane transport proteins forms tiny hydrophilic pores in the membrane through which solutes can pass by diffusion
 - A transporter
 - A channel
 - A pump
 - carrier proteins
- The movement of an ion down its electrochemical gradient is called _____
- Ribbon like bands that connects adjacent epithelial cells that prevent leakage of fluid across the cell layer is called:
 - Tight junction
 - Gap junction
 - Adheren junction
 - Plasmodesmata
- Each monomer is rotated by _____° in the actin filament to form a double stranded helix.
- When cells respond to an extracellular signal, they most often convert the information from one form to another. This process is called:

24. a) Describe the various ways of cell-cell interactions.

(OR)

b) Explain the role and functions of cytoskeletal filaments in cellular organization.

25. a) Outline the different models of cell signaling mechanism.

(OR)

b) Discuss the roles of second messengers and protein kinases in signal transduction.
