Code No: RR212301 **Set No. 1**

II B.Tech I Semester Supplementary Examinations, November 2006
CELL BIOLOGY
(Bio-Technology)

Time: 3 hours **Max Marks: 80**

Answer any FIVE Questions
All Questions carry equal marks

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1. What are the major differences between eukaryotic and procaryotic cells? [16]
2. Explain with diagrams the structure and functions of plasma membrane. [16]
3. What is the purpose of inter cellular compartmentation in the cell. Explain? [16]
4. Describe the origin and function of Lysosome. [16]
5. Describe the events that characterize each stage of mitosis. [16]
6. Describe cytoplasmic determinates present in the germ cells. [16]
7. What are the different kinds of chemo receptors that are involved in transmission of signals across bacterial membranes. [16]
8. Write a note on G Protein receptors. [16]

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Code No: RR212301 **Set No. 2**

II B.Tech I Semester Supplementary Examinations, November 2006
CELL BIOLOGY
(Bio-Technology)

Time: 3 hours **Max Marks: 80**

Answer any FIVE Questions
All Questions carry equal marks

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1. Explain the complexity of cell in an organism in view of its structure and function. [16]
2. What are the constituents of cytoplasm and describe the various organelles present in cytoplasm. [16]
3. Describe the structure and functions of smooth and rough endoplasmic reticulum. [16]
4. Write short notes on:
   (a) Thylakoid membrane.
   (b) Processes that takes place in chloroplast.
   (c) Grana.
   (d) Photo synthetic phosphorylation. [16]
5. What changes occur in the nucleus during prophase, metaphase, anaphase and telophase? [16]
6. Explain the cytoplasmic determinants and describe the localization of cytoplasmic determinants in eggs. [16]
7. Discuss the process by which bacterial cells respond to attractants or repellents. [16]
8. Discuss the role of co and co calmodulia complexes:- Signal transduction. [16]

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Code No: RR212301 **Set No. 3**

II B.Tech I Semester Supplementary Examinations, November 2006
CELL BIOLOGY
(Bio-Technology)

Time: 3 hours **Max Marks: 80**

Answer any FIVE Questions
All Questions carry equal marks

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1. What is a cell? Define the statement that "cell is the structural and functional unit of life". [16]
2. Write notes on:
   (a) Microtubules.
   (b) Microfilaments. [16]
3. How can you distinguish rough ER from smooth ER in an electron micrograph? What is this distinction based on? Explain. [16]
4. Write detail about the organell which does the function of Secretion and Endocytosis. [16]
5. Describe and draw a cell that is in prophase, metaphase, anaphase and telophase. [16]
6. Define cell differentiation and morphological differentiation. [16]
7. Write short notes on:
   (a) Chemo taxis.
   (b) Tumbling motion.
   (c) Smooth swimming motion.
   (d) Receptor triggered phosphoryktion. [16]
8. What do you mean by signals with internal receptors and signals with cell surface receptors? [16]

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Code No: RR212301 **Set No. 4**

II B.Tech I Semester Supplementary Examinations, November 2006
CELL BIOLOGY
(Bio-Technology)

Time: 3 hours **Max Marks: 80**

Answer any FIVE Questions
All Questions carry equal marks

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1. Describe in detail the basic properties of cells. [16]
2. What concepts of general chemistry are important for cell structure and function? [16]
3. Distinguish the structure and functions of smooth and rough endoplasmic reticulum. [16]
4. Describe the structure and function of peroxisomes with a note on its role in plant and animal cells. [16]
5. Describe and draw a cell that is in prophase, metaphase, anaphase and telophase. [16]
6. Describe molecular mechanism of cell differentiation. [16]
7. Discuss the process by which bacterial cells respond to attractants or repellents. [16]
8. What happens to most of the calcium absorbed by the GI tract? Write the role of Ca^{+2} in hormone action. [16]

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