Code No: A109212302 **R09** **Set No. 2**

II B.Tech I Semester Examinations,MAY 2011
CELL BIOLOGY
Bio-Technology

Time: 3 hours **Max Marks: 75**

Answer any FIVE Questions
All Questions carry equal marks

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1. Explain the structural basis of cdk activation with schematic representation. [15]
2. Give an overview of nuclear morphology and its components. [15]
3. Discuss the mechanism of transport in prokaryotic cells. [15]
4. Discuss in detail nuclear receptor proteins and how they control multiple input pathways. [15]
5. Give an account of cytoplasmic factors that determine and play an important role in cellular differentiation. [15]
6. Discuss the colloidal properties & chemical nature of cytoplasm. [15]
7. Discuss how the misfolded proteins will not go unrecognized within ER and will not accumulate to excessive levels within ER lumen. [15]
8. What are telomers? Discuss how telomerase expression contributes to immortalization of cancer cells? [15]

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Code No: A109212302 **R09** **Set No. 4**

II B.Tech I Semester Examinations,MAY 2011
CELL BIOLOGY
Bio-Technology

Time: 3 hours **Max Marks: 75**

Answer any FIVE Questions
All Questions carry equal marks

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1. Discuss the role of various viruses for development of tumours. [15]
2. Discuss the structure and chemical composition of plasma membrane. [15]
3. Discuss the detailed structure of nucleus of a eukaryotic cell, also make a mention of how nuclear DNA is packaged into chromosomes. [15]
4. Write a note on different mechanism by which the inactivation of a Cdk takes place in the cell cycle process. [15]
5. Describe second messengers their example and their participation in some pathways. [15]
6. Write notes on:
   (a) ATPase transport pump
   (b) RBC transport protein. [15]
7. Elucidate the steps of movement of a soluble secretory protein such as a digestive enzyme in pancreas cell moves from RER to the cis golgi cisterna from cis cistern to TGN. [15]
8. Explain the mechanism behind regulatory DNA defining the succession of gene patterns in development. [15]

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Code No: A109212302 **R09** **Set No. 1**

II B.Tech I Semester Examinations,MAY 2011
CELL BIOLOGY
Bio-Technology

Time: 3 hours **Max Marks: 75**

Answer any FIVE Questions
All Questions carry equal marks

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1. Write notes on the following:
   (a) G-protein coupled receptors
   (b) Receptor Tyrosine Kinases. [15]
2. Discuss the structure of chloroplast and specify the intercompartments of chloroplasts where photosynthesis takes place. [15]
3. Write the important historical landmarks events which elucidate the mechanism of cellular differentiation. [15]
4. Give an account of ATP powered pump & the intracellular ionic environment. [15]
5. Discuss the structure and properties of prokaryotic cells highlighting its diversity. [15]
6. Compare the similarities and dissimilarities of a plant vacuole with lysosome. [15]
7. Explain with an experimental strategy how transgenic mice can be used as a model to uncover the function of cancer critical genes. [15]
8. Write how in the process of cytokinesis the division of cytoplasm into how many daughter cells takes place by the constriction in the animal cells compared to the constriction in plant cells. [15]

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Code No: A109212302 **R09** **Set No. 3**

II B.Tech I Semester Examinations,MAY 2011
CELL BIOLOGY
Bio-Technology

Time: 3 hours **Max Marks: 75**

Answer any FIVE Questions
All Questions carry equal marks

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1. Write on the series of events that take place during G2 phase of the cell division. [15]
2. Discuss the causes of different type of cancer development. [15]
3. Discuss various models of plasma membrane. [15]
4. Discuss protein targeting and describe the destination of proteins synthesized by RER. [15]
5. "Lysosomes are called suicidal bags". Justify itand also mention the disease associated with it. [15]
6. What are the cytoplasmic determinants of cellular processes leading to cell differentiation? [15]
7. What is accelerating positive feed back mechanism? Explain how cells remember the effect of some signals. [15]
8. Define exocytosis. Explain how proteins are sorted in golgi complex and transported to lysosomes and plasma membrane. [15]

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