

Code No: 07A72309

**R07**

**Set No. 2**

IV B.Tech I Semester Examinations, May 2011  
CANCER BIOLOGY  
Bio-Technology

Time: 3 hours

Max Marks: 80

Answer any FIVE Questions  
All Questions carry equal marks

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1. Discuss in detail the cell cycle and its regulation by some biological factors? [16]
2. What is cell cycle and explain the process involved in the regulation of cell cycle? [16]
3. Write short notes on:
  - (a) Possible outcomes of chemotherapy in cancer.
  - (b) Possible outcomes of hormonal therapy in cancer. [8+8]
4. Explain the role of ECM components and the basement membranes in tumor metastasis. [16]
5. Classify the types of radiation? Explain the physiological consequences of radiation? [16]
6. Write short notes on:
  - (a) G-protein coupled receptors
  - (b) *erb A*. [8+8]
7. Write short notes on:
  - (a) Screening and treatment of infections.
  - (b) Samples for analysis-cell lines, tissues, and biological fluids. [8+8]
8. What are the biosynthetic pathways for nucleic acid synthesis? Give a note on different inhibitors. [16]

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**Set No. 4**

IV B.Tech I Semester Examinations, May 2011  
CANCER BIOLOGY  
Bio-Technology

Time: 3 hours

Max Marks: 80

Answer any FIVE Questions  
All Questions carry equal marks

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1. Write short notes on:
  - (a) Angiogenesis.
  - (b) Tumor viruses and cancer. [8+8]
2. Explain the metabolic pathways for carcinogen metabolism? [16]
3. Explain
  - (a) skin cancer
  - (b) colon cancer. [8+8]
4. Can the gene expression patterns of cancer cells be used to identify targets for cancer diagnosis or therapy?-discuss. [16]
5. What are different specific domains that mediate interaction between signaling proteins? [16]
6. (a) Explain the effects of radiation?  
(b) Discuss:
  - i. Chromosome aberrations
  - ii. DNA finger printing. [4+6+6]
7. Explain:
  - (a) Tumor cell senescence in cancer treatment.
  - (b) Histone deacetylase inhibitors in cancer treatment. [8+8]
8. Explain:
  - (a) Chemotactic factors in cancer cell migration.
  - (b) Role of oncogenes in tumor metastasis. [8+8]

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**Set No. 1**

IV B.Tech I Semester Examinations, May 2011  
CANCER 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 role of retinoblastoma protein in the cell cycle control? [16]
2. What are growth factors? Explain functional diversity of growth factors? [16]
3. What is ionizing radiation? Discuss the temporal stages of radiation action? [16]
4. Write short notes on :
  - (a) Metastatic potential.
  - (b) Genetic instability. [8+8]
5. What is Ames test? How the test can be utilized in identifying mutagenesis? [16]
6. What are the new approaches to radiation therapy in relation to cancer? [16]
7. Describe with reference to specific examples how laboratory techniques are used to diagnose, grade and stage neoplasia. [16]
8. Explain :
  - (a) Types of genetic mutations present in cancer.
  - (b) Functions of cell derived oncogene products. [8+8]

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**Set No. 3**

IV B.Tech I Semester Examinations, May 2011  
CANCER BIOLOGY  
Bio-Technology

Time: 3 hours

Max Marks: 80

Answer any FIVE Questions  
All Questions carry equal marks

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1. Explain:
  - (a) PI-3kinase
  - (b) RTKs. [8+8]
2. What are antioxidants? Explain their role in the prevention of cancer? [16]
3. Write short notes on :
  - (a) Catenins.
  - (b) Cadherins. [8+8]
4. What are oncogenes? Explain the oncogenes that encode growth factors? [16]
5. Write short notes on:
  - (a) Radio protectors
  - (b) radiation dose
  - (c) Sources of radiation. [6+5+5]
6. Sensitivity and specificity address the validity of screening tests-Discuss. [16]
7. What are radio pharmaceuticals and how are they used in cancer treatment. [16]
8. Write an account on individual differences in drug metabolizing enzymes and susceptibility to carcinogenesis? [16]

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