

Code No: M2328/R07

Set No. 1

**IV B.Tech I Semester Supplementary Examinations, Feb/Mar 2011
CANCER BIOLOGY
(Bio-Technology)**

Time: 3 hours

Max Marks: 80

**Answer any FIVE Questions
All Questions carry equal marks**

1. Explain in detail the mechanism involved in the oncogenic subversion of signaling pathways? [16]
2. Define tumour suppressor genes (TSG)? Explain the mechanism of action of TSG in the regulation of cancer progression at least with two examples? [16]
3. Discuss the mechanisms of carcinogen activation and action? [16]
4. What is ionizing radiation? Discuss the temporal stages of radiation action? [16]
5. Explain:
 - (a) Role of DNA methylation in the activation of proto-oncogenes.
 - (b) G-protein-coupled receptor genes as proto-oncogenes. [8+8]
6. Explain:
 - (a) Relationship of cancer metastasis to normal tissue invasion events.
 - (b) Role of lytic enzymes in the metastasis cascade. [8+8]
7. Sensitivity and specificity address the validity of screening tests-Discuss. [16]
8. Write short notes on:
 - (a) Possible outcomes of chemotherapy in cancer.
 - (b) Possible outcomes of hormonal therapy in cancer. [8+8]

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Set No. 2

**IV B.Tech I Semester Supplementary Examinations, Feb/Mar 2011
CANCER BIOLOGY
(Bio-Technology)**

Time: 3 hours

Max Marks: 80

**Answer any FIVE Questions
All Questions carry equal marks**

1. What are cytokine receptors? Explain in detail about receptor protein tyrosine kinases? [16]
2. How tumour cells can be formed? Explain the dissemination tumour cells by different routes? [16]
3. What are phase I and phase II reactions in carcinogenesis and explain? [16]
4. Discuss various specific cancer types that are caused by radiation? [16]
5. Write short notes on:
 - (a) Angiogenesis.
 - (b) Tumor viruses and cancer. [8+8]
6. Explain:
 - (a) Role of plasma membrane components in metastasis.
 - (b) Role of extracellular matrix components and the basement membranes in tumor metastasis. [8+8]
7. Write about the Cancer classification by expression profiling. [16]
8. Explain the different types of cancer therapy. [16]

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Set No. 3

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CANCER BIOLOGY
(Bio-Technology)**

Time: 3 hours

Max Marks: 80

**Answer any FIVE Questions
All Questions carry equal marks**

1. What are growth regulators? Explain the sites of release of growth regulators in relation to cancer formation? [16]
2. Explain the concept of dominant and recessive cancer genes? [16]
3. What is Ames test? How the test can be utilized in identifying mutagenesis? [16]
4. What is ionizing radiation? Discuss the temporal stages of radiation action? [16]
5. Write short notes on:
 - (a) Angiogenesis.
 - (b) Tumor viruses and cancer. [8+8]
6. Write short notes on :
 - (a) Metastatic potential.
 - (b) Genetic instability. [8+8]
7. Write short notes on:
 - (a) Safety and acceptability of screening tests of cancer.
 - (b) Evaluation of cancer screening. [8+8]
8. Explain:
 - (a) Oncogene targeted gene therapy in cancer.
 - (b) Suicide gene therapy. [8+8]

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Set No. 4

**IV B.Tech I Semester Supplementary Examinations, Feb/Mar 2011
CANCER BIOLOGY
(Bio-Technology)**

Time: 3 hours

Max Marks: 80

**Answer any FIVE Questions
All Questions carry equal marks**

1. What are receptors? Explain in detail the super family of receptor tyrosine kinases? [16]
2. Discuss the tumour suppressor gene alterations in different types of human cancers? [16]
3. Discuss the role of chemical carcinogenesis and mutations in human cancer? [16]
4. What is ionizing radiation? Discuss the temporal stages of radiation action? [16]
5. Write short notes on:
 - (a) Angiogenesis.
 - (b) Tumor viruses and cancer. [8+8]
6. Explain the role of ECM components and the basement membranes in tumor metastasis. [16]
7. Write short notes on following types of screening tests:
 - (a) Visual inspection.
 - (b) Palpation. [8+8]
8. What are stereotactic radio surgery and stereotactic radio therapy? [16]
