

2007 ANDHRA UNIVERSITY
B.TECH BIO-TECHNOLOGY 4-1
CANCER BIOLOGY

TIME: 3 HOUR
MARK: 70

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- ❖ Answer Question No.1 Compulsorily (1*14=14)
❖ Answer ONE Question From Each Unit (4*14=56)
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1. Write short notes on

1. Checkpoints in cell cycle
2. Cyclins
3. myc
4. HSR
5. PDGF
6. FGF
7. Tyrosine kinase
8. Dielectric relaxation time
9. Metastasis.
10. TNM staging
11. Retro virus
12. Magnetic bullets
13. Benign tumor
14. Philadelphia chromosome.

UNIT I

- 2.a. Write an essay on tumor suppressor genes.
(or)
- b. Give an account of mutations that cause changes in signal molecules.
- c. Give various forms of cancer

UNIT II

- 3.a. What are MFOs? Discuss the molecular mechanism of activation of polycyclic aromatic hydrocarbon "Benzopyrene" to a potent carcinogen that binds to DNA with neat labelled diagram.
- b. Explain in detail the temporal changes caused by radiation action.
(or)

- c. Discuss principles of physical carcinogenesis.
- d. Give an account of x-ray radiation mechanism of carcinogenesis.

UNIT III

- 4.a. Discuss the molecular mechanism involved in the conversion of proto-oncogenes to oncogenes.
- b. Explain the techniques adopted in the detection of oncogenes using viruses and viruses to oncogenes.
- (or)
- c. Give the growth factors related to transformations.
- d. Discuss about growth factors and growth factor receptors that are oncogenes.

UNIT IV

- 5.a. Explain the techniques employed in diagnosis of cancer.
- b. Give an account metastatic cascade
- (or)
- c. Discuss about chemotherapy and radiation therapy of cancer treatment.

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