

DEPARTMENT OF ZOOLOGY

2nd SEMESTER

CLASS TEST

Paper- C4

FULL MARKS- 40

1. Answer the following questions- (any five)

5×2=10

- I. Mention the significance of G0 stage in cell cycle.
- II. Comment on APC in cancer.
- III. Define tumor suppressor gene with example.
- IV. What do you mean by secondary messenger? Give example.
- V. Differentiate cis golgi & trans golgi.
- VI. Mention the role of P53 in cell cycle.
- VII. Write a short note on heterochromatin.
- VIII. Write down the function of cytoskeleton.
- IX. Difference between active transport & passive transport.

2. Answer the following questions- (any four)

5×4=20

- I. Write short note on MT, MF & Ifs.
- II. Write short note on Rb gene, P21, P53 & Ras protein in cancer.
- III. Describe the structure of nucleosome model with suitable diagram.
- IV. Give a brief account of the fine structure & functions of centrosome.

3+2

- V. What is chemi-osmotic hypothesis? Describe the chemi-osmotic theory in mitochondria. 1+4
- VI. Why mitochondria is called semi- autonomous nature. Add note on mitochondrial respiratory chain. 1+4
- VII. Chemical nature of cell cycle regulators & checkpoints.

3. Answer the following questions- (any one)

10×1=10

- I. Write the characteristic feature of meiotic prophase-1 with diagram. Write the significance of meiosis. Compare the difference between mitosis & meiosis. 5+2+3
- II. What do you mean by oncogenesis? How protooncogene is converted into oncogene. What is the fundamental differences between C- oncogene & V- oncogene. Retinoblastoma is consider as oncogenetic suppressor gene with example. 2+3+2+3