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**UNIVERSITY**

(Karunya Institute of Technology & Sciences)

(Declared as Deemed-to-be University under Sec.3 of the UGC Act, 1956)

Reg.No. \_\_\_\_\_\_\_\_\_\_\_\_\_

**End Semester Examination – Nov/Dec - 2016**

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|  |  | **Semester :** | **2016-17 ODD** |
| **Code :** | **09BT235/12BT243/BT216** | **Duration :** | **3 hrs** |
| **Sub. Name :** | **CANCER BIOLOGY** | **Max. marks :** | **100** |

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| **Q. No.** | **Questions** | **Marks** |
| **PART-A(10X1=10 MARKS)** | | |
| 1. | p53 is a \_\_\_\_\_\_\_\_\_\_\_\_ gene. | (1) |
| 2. | \_\_\_\_\_\_\_\_\_\_\_ heterodimerizes with cdk in cell cycle. | (1) |
| 3. | The cancer causing agents are called as \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | (1) |
| 4. | Write any one physical carcinogen. | (1) |
| 5. | Which is the growth factor that causes angiogenesis in cancer? | (1) |
| 6. | \_\_\_\_\_\_\_\_\_\_\_\_is a normal gene that could become an oncogene due to mutations. | (1) |
| 7. | When cancer tumors spread to the healthy tissues surrounding the tumor, it is called as \_\_\_\_\_\_\_. | (1) |
| 8. | The spread of cancer cells to new areas of the body is termed as \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | (1) |
| 9. | What is meant by biopsy? | (1) |
| 10. | What is the mechanism of action of Methotrexate chemotherapeutic agent? | (1) |

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| **PART B(5 X 3= 15 MARKS)** | | |
| 11 | What are tumour suppressor genes? Give examples. | (3) |
| 12 | Define chemical carcinogenesis. | (3) |
| 13 | Write a note on Telomerase. | (3) |
| 14 | What is meant by metastasis? | (3) |
| 15 | Write a short note on chemotherapy. | (3) |

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| **PART C(5 X 15= 75 MARKS)** | | | |
| 16. |  | Describe the regulation of cell cycle with a suitable diagram. | (15) |
| (OR) | | | |
| 17. |  | Explain the methods used for screening and early detection of cancer. | (15) |
| 18. |  | Explain the theories of carcinogenesis. | (15) |
| (OR) | | | |
| 19. |  | Write a brief note about physical carcinogenesis. | (15) |
| 20. |  | Explain in detail about the oncogenes and proto-oncogenes. | (15) |
| (OR) | | | |
| 21. |  | Briefly discuss about the growth factors related to transformation. | (15) |
| 22. |  | Explain the heterogeneity of metastatic phenotype. | (15) |
| (OR) | | | |
| 23. |  | Discuss about the three step theory of invasion. | (15) |
| 24. |  | Discuss briefly about the different forms of cancer therapy. | (15) |
| (OR) | | | |
| 25. | a. | Explain gene therapy for cancer. | (10) |
| b. | Mention the advantages and disadvantages of gene therapy. | (5) |

ALL THE BEST