QP Code: PV25C005

Reg. No : .....
Name : .....

ST MARY'S COLLEGE (AUTONOMOUS), THRISSUR-20

III SEMESTER (CBCSS - VPG) DEGREE EXAMINATIONS, OCTOBER 2025
M. Voc. Applied Biotechnology
SDC3ABE2 : CANCER BIOLOGY
2024 Admission Onwards

Time:3 Hours **Maximum Weightage:30**

Part A

*Short answer type questions. Answer **any four**. Weightage **2** for each.*
(4x2 = 8 Weightage)

1. Name the difference between localized and metastatic cancer.
2. Define Clonal expansion.
3. Define chemotherapy.
4. Explain Apoptosis Intrinsic Pathway.
5. Analyze the importance of cancer treatment stratergies in future.
6. How do autophagy-mediated processes, such as the clearance of DNA repair enzymes, contribute to genomic stability and the prevention of oncogenic mutations?
7. Break down the diagnostic workflow from patient presentation to final radiological report.

Part B

*Short essay-type questions. Answer **any four**. Weightage **3** for each.*
(4x3 = 12 Weightage)

8. Name two tumor suppressor genes commonly mutated in cancers.
9. State one example of a disease primarily diagnosed through clinical signs.
10. Summarize the role of biopsy in confirming radiological findings.
11. List the main types of stem cell transplantation.
12. Analyze how loss of p53 and activation of MYC together promote tumorigenesis.
13. How can you apply the knowledge of carotenoids' antioxidant properties to designing a diet for cancer prevention?
14. Explain why vitamin D may be effective against many types of cancer based on its ability to modulate immune function and anti-metastasis properties.

Turn Over

Part C

*Essay-type questions. Answer **any two**. Weightage **5** for each.*
(2x5 = 10 Weightage)

15. Define the TNM system of cancer staging.
16. Explain how oncogenes contribute to cancer progression.
17. Describe the role of receptor tyrosine kinases in signal transduction.
18. Debate whether cancer should be viewed primarily as a genetic disease or as a disease of dysregulated signaling pathways.

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