

MSc Sem.-1 Examination

404

Cancer Biology

February-2025

Time : 2-30 Hours]

[Max. Marks : 70

Instructions:

**All Questions are compulsory
Draw neat and labeled diagram
wherever necessary**

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|------------|---|-----------|
| Q-1 | Write the following | 14 |
| | (i) What is epidemiology? Discuss molecular epidemiology and conventional epidemiology. | 7 |
| | (ii) Describe chemistry and metabolism of chemical carcinogens. | 7 |
| | OR | |
| | (i) Write about interpretation of epidemiological studies. | 7 |
| | (ii) Describe external factors that cause cancer. | 7 |
| Q-2 | Write the following | 14 |
| | (i) Describe various types of analytical studies used in cancer research and explain Ecological type of analytical study in detail. | 7 |
| | (ii) Write a short note on Peutz–Jeghers syndrome. | 7 |
| | OR | |
| | (i) What is cancer registry? Illustrate the population-based cancer registry and hospital-based cancer registry. | 7 |
| | (ii) Explain the damage mechanism of radiofrequency radiation and microwave radiation. | 7 |
| Q-3 | Write the following | 14 |
| | (i) Write a note on Retinoids use as cancer therapy as well as chemoprevention. | 7 |
| | (ii) Write a note on characteristics of various screening tests. | 7 |
| | OR | |
| | (i) Discuss role of micronutrients used as cancer prevention. | 7 |
| | (ii) Describe about screening tests for uterine cervical and colon cancers. | 7 |
| Q-4 | Write the following | 14 |
| | (i) Write a note on Soy Protein and its role in cancer therapy. | 7 |
| | (ii) Explain about principle and definition of screening tests. | 7 |
| | OR | |

(P.T.O)

- (i) Explain the mechanism of anticancer effects of calcitriol. 7
 (ii) Describe about screening tests for breast and prostate cancers. 7

Q-5 MCOs (Any seven out of twelve)

14

- 1 In analytical study, bias is a _____.
 a Chance b Systematic error
 c Random error d Confounding factor
- 2 Prevalence is defined as _____.
 a Risk b Proportion
 c Ratio d Rate
- 3 In statistics, 95% confidential interval demonstrates _____.
 a Specificity b Sensitivity
 c Accuracy d Precision
- 4 Progesterone is a type of _____.
 a Peptide hormone b Amino acid derivatives
 c Prostaglandin d Steroids
- 5 Genetic defects in NER pathway results in _____.
 a Cowden syndrome b Turner's syndrome
 c Peutz-Jeghers syndrome d Xeroderma pigmentosum
- 6 Cowden syndrome is also known as _____.
 a Multiple hamartoma syndrome b Fanconi anemia
 c Hereditary non-polyposis colon cancer d Familial adenomatous polyposis
- 7 How many different types of carotenoids found in nature?
 a 100 b 1000
 c 600 d 400
- 8 Which form of Vitamin D is hormonally-active form?
 a 25-hydroxycholecalciferol b 1,25-dihydroxycholecalciferol
 c 7-dehydrocholesterol d None of above
- 9 In the small intestinal enterocyte, β -carotene can be transformed into _____.
 a Retinol b Tretinoin
 c Retinal d Retinyl ester
- 10 Colonoscopy test is used as a screening test for _____ cancer.
 a Colorectal b Breast
 c Cervical d Oral
- 11 Which one from the following helps people to understand the impact of genetics on health?
 a Genetic counseling b Television
 c Media d News papers
- 12 Proportion of negative test results is known as _____.
 a True Negative b False Negative
 c True Positive d False Positive