

**0201N1452**  
**M.Sc. Sem.-1 Examination**  
**404**  
**Cancer Biology**  
**January-2024**

Candidate's Seat No : \_\_\_\_\_

**Time : 2-30 Hours]**

**[Max. Marks : 70**

**Instructions:**

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

- |            |   |                  |
|------------|---|------------------|
| <b>Q-1</b> | <p><b>Write the following</b></p> <p>(i) Discuss case control study and ecological type of study with their advantages and disadvantages. 7</p> <p>(ii) Elucidate the cellular response to radiation in detail. 7</p> <p style="text-align: center;"><b>OR</b></p> <p>(i) In interpretation of epidemiological data, explain about random error, systemic error and confounding factors. 7</p> <p>(ii) Describe the hormones as a cancer risk factor. 7</p>   | <p><b>14</b></p> |
| <b>Q-2</b> | <p><b>Write the following</b></p> <p>(i) Define cancer epidemiology. What are the sources available to collect the data for cancer epidemiological studies? 7</p> <p>(ii) Describe Cowden syndrome in detail. 7</p> <p style="text-align: center;"><b>OR</b></p> <p>(i) Define risk, ratio, hazard ratio, 95% confidence interval, proportion, mortality, survival, incidence and prevalence used in statistical data measurement and analysis. 7</p> <p>(ii) Describe oncogenic viruses, their site of persistence and infection rate. 7</p> | <p><b>14</b></p> |
| <b>Q-3</b> | <p><b>Write the following</b></p> <p>(i) Describe how yoga helps to cancer patients and cancer survivors. 7</p> <p>(ii) Write a short note about developing and evaluating a cancer screening programme. 7</p> <p style="text-align: center;"><b>OR</b></p> <p>(i) Write a note on structure and synthesis of Vitamin D. 7</p> <p>(ii) Describe about genetic counseling for cancer patients. 7</p>   | <p><b>14</b></p> |

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- |            |   |           |
|------------|---|-----------|
| <b>Q-4</b> | <b>Write the following</b>  | <b>14</b> |
| (i)        | Write about the risk factors causing for cancer.                      | 7         |
| (ii)       | Write a note on screening tests used for breast and prostate cancers. | 7         |
|            | <b>OR</b>   |           |
| (i)        | Write a note on role of micronutrients as cancer prevention.          | 7         |
| (ii)       | Describe about screening tests for cervical and colon cancers.        | 7         |

<b>Q-5</b>	<b>MCQs (Any seven out of twelve)</b>	<b>14</b>
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- 1 In statistics, 95% confidence interval indicates \_\_\_\_\_.**

a Specificity	b Sensitivity
c Accuracy	d Precision
- 2 Which of the following genetic alteration is present in Li-Fraumeni syndrome?**

a 1 normal and 1 mutated copy of P53 gene	b Both mutated copies of P53 gene
c Both normal copies of P53 gene	d Deletion of P53 gene
- 3 Carotenoids are lipid soluble and derived from a \_\_\_\_\_ polyene chain.**

a 30 carbons	b 40 carbons
c 45 carbons	d 50 carbons
- 4 Mammography is used as screening test for \_\_\_\_\_.**

a Cervical cancer	b Breast cancer
c Colon cancer	d Oral cancer
- 5 Which of the following is not analytical type of study?**

a Cohort study	b Case control study
c Prevalence study	d Cross sectional study
- 6 Human papilloma virus causes \_\_\_\_\_ cancer.**

a Liver cancer	b Stomach cancer
c Cervical cancer	d Leukemia
- 7 How much amount of protein content is present in Soy isolate?**

a 20%	b 50%
c 60%	d 90%
- 8 The proportion of positive test result is known as: \_\_\_\_\_.**

a True Negative	b False Negative
c True Positive	d False Positive
- 9 In epidemiological data, low prevalence indicates \_\_\_\_\_.**

a Low risk and rapid cure	Rapid cure with low risk
c High risk without cure	Low risk without cure

N1452.3

- 10 Which of the following UV rays are absorbed by DNA?
- |   |     |   |           |
|---|-----|---|-----------|
| a | UVA | b | UVC       |
| c | UVB | d | UVB & UVC |
- 11 Genistein reduces expression levels of \_\_\_\_\_, Which is an oncogenic micro-RNA that is expressed in breast tumors.
- |   |         |   |         |
|---|---------|---|---------|
| a | miR-155 | b | miR-157 |
| c | miR-200 | d | miR-201 |
- 12 A \_\_\_\_\_ identifies symptomatic individuals who may have the disease.
- |   |                 |   |        |
|---|-----------------|---|--------|
| a | Screening Test  | b | IVTC   |
| c | Diagnostic Test | d | Biopsy |

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