

MASTER OF SCIENCE (BIOINFORMATICS) (CBCS-2019 COURSE)
M. Sc. (Bioinformatics) Sem-III : WINTER :- 2021
SUBJECT: CANCER GENOMICS

Day : Monday
Date 7/2/2022

W-21182-2021

Time : 02:00 PM-03:30 PM
Max. Marks: 30

N.B.

- 1) All questions are **COMPULSORY**.
 - 2) Figures to the **RIGHT** indicate **FULL** marks.
 - 3) Answer to both the sections should be written in **SAME** answer book.
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SECTION – I

Q.1 Attempt **ANY FIVE** of the following : **(05)**

- a) Name types of cancers.
- b) List any three cancer hallmarks.
- c) Difference between benign and malignant tumors.
- d) Define oncogenes.
- e) Role of p53.
- f) Define CDKs and CDKIs.

Q.2 Attempt **ANY TWO** of the following : **(10)**

- a) Write about clonal selection in cancer with graphic illustration.
- b) Write about genomic instability and its role in cancer.
- c) Explain the role of cyclins in cancer.

SECTION – II

Q.3 Attempt **ANY FIVE** of the following : **(05)**

- a) List the top three prevalent cancers in India.
- b) List any three symptoms of breast cancer.
- c) List one oncogene and one tumor suppressor gene.
- d) List any two cancer detection techniques.
- e) Describe the metastasis.
- f) List known carcinogens for skin cancer.

Q.4 Attempt **ANY TWO** of the following : **(10)**

- a) Describe in detail cancer treatments available in India.
- b) Write about seven generic signs of cancer.
- c) Write in detail about differentiation related pathways in cancer.
