MEDICAL ONCOLOGY
PAPER-I

Time: 3 hours MED.ONCO./J/20/17/I
Max. Marks:100

Important Instructions:

- *Attempt all questions in order.*
- *Each question carries 10 marks.*
- *Read the question carefully and answer to the point neatly and legibly.*
- *Do not leave any blank pages between two answers.*
- *Indicate the question number correctly for the answer in the margin space.*
- *Answer all the parts of a single question together.*
- *Start the answer to a question on a fresh page or leave adequate space between two answers.*
- *Draw table/diagrams/flowcharts wherever appropriate.*

Write short notes on:

1. a) Goldie-Coldman hypothesis. 2+4+4
   b) Dose density in chemotherapy.
   c) Chemo-radiation.

2. a) Clinical application of pharmacogenomics. 3+4+3
   b) Potential applications of Artificial Intelligence in Oncology.
   c) Phase 0 clinical trials.

3. a) Clinical applications of massive parallel sequencing. 3+4+3
   b) Testing for KRAS mutations in Oncology.
   c) Epigenetics in cancer.

4. a) Enumerate polyposis syndromes with risk of colon cancer. 2+4+4
   b) Microsatellite instability.
   c) Immunotherapy of colon cancer.

5. a) Tumour mutation burden. 2+4+4
   b) PERCIST 1.0.
   c) Imaging of Neuro-endocrine tumours.

6. a) Targeted agents as radio-sensitizers. 3+3+4
   b) Antibody-drug conjugates.
   c) Enumerate various approaches of immunotherapy with examples.

7. a) Sunscreens in prevention of skin cancer. 3+4+3
   b) Assessment of risk for hereditary breast cancer.
   c) Hormonal prevention of breast cancer.

8. a) Ebstein-Barr virus and human cancer. 4+3+3
   b) Hepatitis C and cancer.
   c) Vaccines in prevention of cancers due to infections.

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9. a) Targeted therapies that inhibit VEGF signaling. 4+3+3
   b) Adverse effects of VEGF inhibitors.
   c) Newer VEGF molecules available for therapy.

10. a) Imaging studies in diagnosis and staging of ovarian cancer. 4+3+3
    b) Role of interim PET-CT scan in DLBCL treatment.
    c) Tomosynthesis.

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