

**RADIATION ONCOLOGY****PAPER-IV**Time: 3 hours  
Max. Marks:100

RTH/D/20/41/IV

**Important Instructions:**

- *You are provided with 5 answer sheet booklets. Each individual answer sheet booklet consists of 10 pages excluding the covering jackets.*
- *Answers to all the questions must be attempted within these 5 answer sheet booklets which must be later tagged together at the end of the exam.*
- *No additional supplementary answer sheet booklet will be provided.*
- *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. Discuss the steps involved in evaluating an IMRT plan. 10
2. What factors underline the decision to undertake palliative treatment for malignant disease? Give specific examples for the use of radiotherapy as palliative measures. 5+5
3. Role and policy of re-irradiation in head and neck malignancy. 5+5
4. Rationale and indications for using radioimmunoglobulins in malignant disease. 10
5. Hemi-body radiation: indications, technique and doses delivered. 3+5+2
6. a) PDR Brachytherapy. 3+3+4  
b) SPECT.  
c) Extracorporeal Radiotherapy.
7. a) TARE. 5+5  
b) Cervical Vaccination.
8. Discuss in detail the various hypofractionated radiation regimen in breast cancer. Mention the merits and demerits of these regimen. 6+4
9. Treatment of hepatocellular carcinomas with a note on the imaging studies required prior to planning the different modalities of radiation. 6+4
10. Clinical relevance of liquid biopsy in malignant tumours – mechanism, indications and its role in monitoring disease. 3+3+4

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