

RADIOTHERAPY

PAPER - III

RTH/D/13/41/III

Time : 3 hours

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.

1. Describe fundamentals of image guided brachytherapy and International recommendations. Eg ESRTQ. 5+5
2. What are RTOG contouring guidelines for neck nodal irradiation. 10
3. Compare IMRT and 3D-CRT in terms of TCP and NTCP for : 3+3+4
(i) T₁ N₀ glottic SCC (ii) Breast conservation therapy (iii) Glioblastoma of a frontal lobe.
4. What are the results of population based studies of Human Papilloma Virus vaccine? 10
5. What are different ways of combining chemotherapy and radiation therapy in locally advanced head and neck cancers? Which is the most effective strategy and why? What is the new addition? 4+5+1
6. What are your modern strategies of cancer control in India if you are given to design them? 10
7. Explain why combined modality management is now regarded as standard of care using the example of: 5+5
i) T₄ N_{2B} SCC of buccal mucosa
ii) Adenocarcinoma of gastro-esophageal junction
8. What is adaptive radiotherapy? When is it needed and how is it performed? 3+7
9. Discuss indications, techniques advantages and disadvantages of high dose rate brachtherapy in oral cancers. 2+4+2+2
10. Describe in brief the evidence in support of the use of protons in cancer treatment. 10
