

FINAL EXAM  
JUNE 2014

NATIONAL BOARD OF EXAMINATIONS

**RADIOTHERAPY**

PAPER - I

RTH/J/14/41/I

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. Draw labeled diagrams of oral cavity and describe pattern of lymphatic drainage of anterior 2/3<sup>rd</sup> tongue cancer. 4+6
2. Mention pathological classification of ovarian malignancies. Describe salient features of epithelial cancers of ovary. 5+5
3. What are different phases of clinical trials described? Discuss one randomized clinical trial for head and neck cancer which has made clinical impact. 4+6
4. Explain pros & cons of vaccination against carcinoma cervix. Discuss the clinical trial recently conducted worldwide and evidence available. 3+7
5. Draw labeled diagram of conventional radiotherapy simulator and discuss functions of conventional radiotherapy simulator. Describe the various features available with modern CT-Simulator. (3+3)+4
6. Describe maximal permissible dose limits of radiation described by Indian regulatory body. How will you manage a person exposed to 3Gy whole body radiation in Telecobalt area? 5+5
7. What parameters are checked as daily calibration of a dual energy accelerator with MLC? Discuss the characteristics and use of 12 MeV electron beam. 4+(4+2)
8. Enumerate beam modifying devices used for radiotherapy machines. Describe in detail types of wedges available in practice. 4+6
9. Describe briefly various dosage systems of interstitial brachytherapy. Mention the GEC-ESTRO recommendations for intracavitary irradiation for carcinoma cervix. 5+5
10. How will you plan radiotherapy for intact left breast? Discuss hypofractionation schedule used for carcinoma breast. 5+5