

FINAL EXAM  
DECEMBER 2016

NATIONAL BOARD OF EXAMINATIONS

**RADIOTHERAPY****PAPER – II**

RTH/D/16/41/II

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.

Write short notes on:

- a) Classify salivary gland tumors. 3+2+5
  - b) List the indications of radiotherapy in carcinoma parotid gland.
  - c) Radiotherapy technique, dose and side effects for carcinoma of parotid gland.
- a) Human Papilloma Virus (HPV) and head & neck carcinoma with recent evidence. 4+4+2
  - b) List indications of post operative radiotherapy and post operative chemoradiotherapy in head & neck cancer.
  - c) Role of brachytherapy in cancer tongue T<sub>2</sub>N<sub>0</sub>M<sub>0</sub>.
- A 45 year old lady has a T<sub>3</sub>N<sub>0</sub>M<sub>0</sub> muscle invasive transitional cell carcinoma of the urinary bladder. What is her treatment options with regard to: 4+6

  - a) Surgery.
  - b) Bladder Preservation Protocol.
- a) What is Involved Field Radiation Therapy (IFRT), Involved Nodal Radiation Therapy (INRT) and Involved Site Radiation Therapy (ISRT)? 6+4
  - b) ISRT technique for bulky mediastinal adenopathy and its advantages
- a) List the risk factors of carcinoma vulva. 2+2+4+2
  - b) What are the indications of post-operative radiation in carcinoma vulva?
  - c) Techniques of radiotherapy in carcinoma vulva.
  - d) Radiotherapy dose and dose limiting structures in carcinoma vulva.
- a) Staging of soft tissue sarcoma of extremity. 3+4+3
  - b) Pre-operative versus post-operative radiotherapy for soft tissue sarcoma.
  - c) Role of brachytherapy in soft tissue sarcoma of extremity.

**P.T.O.**

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7. With regard to Wilm's tumor, write the: 4+6  
a) Staging  
b) Treatment algorithm based on risk stratification.
8. a) Treatment options of single metastasis in the brain with controlled extra-cranial disease. 5+3+2  
b) Evidence for focal radiotherapy Vs whole brain radiotherapy.  
c) What is the use of Recursive Partitioning Analysis (RPA) classification?
9. A 32 year old lady presented with decreased urinary output, bilateral pedal oedema and severe backache. She also gives history of bleeding per vaginum for 3 months. On evaluation, she was found to have creatinine of 5.4mg/dl and Potassium of 7.0mEq/ml 2+3+2+3  
a) What other blood investigations will you do for emergency management?  
b) How will you correct her hyperkalemia?  
c) What is the possible diagnosis?  
d) Outline the treatment algorithm for such a patient.
10. a) List the indications of Hemibody Irradiation (HBI). 2+2+4+2  
b) What are the types of HBI?  
c) Technique and doses involved in HBI.  
d) Pre & post procedural precautions to be taken for delivery of HBI.

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