

**RADIOTHERAPY**

**PAPER – III**

RTH/D/16/41/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.

Write short notes on:

1. a) Name four situations which require modification of doses of anti-neoplastic chemotherapy. 2+(4+4)  
b) Indications, mechanism of action & side effects of:
  - i) Carboplatin
  - ii) Sorafenib
  
2. a) What is EGFR? 2+2+6  
b) Name the malignancies that are associated with the over-expression of EGFR.  
c) Explain the role of EGFR targeting in three common cancers.
  
3. a) Name the tumours arising from metaphysis and diaphysis. 2+(2+2+2)+2  
b) Role of the following imaging in Ewing's sarcoma:
  - i) Plain X-ray,
  - ii) MRI scan
  - iii) PET-CT scan  
c) Immunohistochemistry tests in histopathologic diagnosis of Ewing's sarcoma.
  
4. a) Name the features associated with a known genetic predisposition to breast carcinoma. 2+3+5  
b) Enumerate the components of risk/benefit assessment and counseling in breast cancer risk reduction.  
c) Define cancer related fatigue, its evaluation and management.
  
5. a) What are the viral infections associated with CNS lymphoma? 2+4+4  
b) Staging work up of CNS lymphoma  
c) Evidence for multimodality treatment and its benefit over radiotherapy alone.

**P.T.O.**

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6. a) What are the non-malignant intracranial lesions treated with radiotherapy? 5+5  
b) Radiotherapy technique and dose of thyroid ophthalmopathy.
7. a) A 50 year old lady has a newly diagnosed esophageal cancer extending from 30 to 35cm (GE junction at 40 cm).What is the role of endoscopic ultrasound and PET-CT Scan in this patient? 4+6  
b) Treatment algorithm in the management of the patient.
8. Transarterial chemo-embolisation: Selection criteria, indications, contraindications & side effects. 2.5x4
9. a) Role of radiotherapy in small cell carcinoma lung, 4+4+2  
b) Technique of radiotherapy and doses in small cell carcinoma lung, and  
c) Tolerance doses of organs at risk.
10. a) Partial breast irradiation: Rationale, Techniques & results. 6+4  
b) Molecular and genetic characteristics of Glioblastoma Multiforme with regards to:  
i) Prognosis  
ii) Management

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