

**RADIOTHERAPY**

PAPER – III

RTH/J/17/41/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. Operable, but locally advanced rectal cancers have been pre-operatively treated by short course RT, with or without chemotherapy and long course RT, with chemotherapy. 5+3+2
  - a) Write down the fractionation schedules and chemotherapeutic agents used in the above schedules.
  - b) How are the pCR and R-O resection rates obtained?
  - c) What is the data on loco-regional control and survival with the above regimens?
2. What is the role of PET-CT in Hodgkin's lymphoma? Explain how the findings modify treatment. 5+5
3.
  - a) In the 2016 classification of CNS tumors, what changes have been introduced for the supra-tentorial glial tumors? 4+3+3
  - b) What is the current post surgical treatment of grade III astrocytomas and oligodendrogliomas?
  - c) Which molecular markers are prognostic and predictive of treatment response in grade III astrocytomas and oligodendrogliomas?
4.
  - a) What are the principles of limb salvage in patients with osteosarcoma? What are the contraindications? (2+2)+6
  - b) Chemotherapy and radiotherapy schedules used in such patients.
5.
  - a) What is mycosis fungoides? 2+(2+4+2)
  - b) Role, technique and results of radiation in mycosis fungoides.
6. Types, different prognostic factors and chemotherapeutic agents used in rhabdomyosarcoma. 2+2+6

**P.T.O.**

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7. a) Classify chemotherapeutic agents. 4+6  
b) Enumerate the toxicities of alkylating agents.
8. With respect to pituitary tumors: 2+3+2+3  
a) Classify them.  
b) List presenting features.  
c) List advantages/disadvantages of the two principal surgical approaches to resect these tumors.  
d) Describe the GTV, CTV and PTV when treating with radiotherapy.
9. a) What are the tumours associated with chronic infection of HPV? Explain the pathogenesis of developing malignancy? (3+4)+3  
b) What are the strategies used for prevention of malignancy in patients thus infected?
10. You wish to treat a patient with adenocarcinoma of prostate with seminal vesicle invasion, but no pelvic lymphadenopathy by radiation therapy. 6+4  
a) List organs at risk, delineation landmarks and tolerance doses that will be co-incidentally irradiated.  
b) List methods to reduce doses to the above organs at risk.

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