

RADIOTHERAPY

PAPER-I

Time: 3 hours
Max. Marks:100

RTH/D/19/41/I

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:

- Describe the anatomy and lymphatic drainage of the oesophagus. 4+4+2
 - Describe the work up and staging of carcinoma oesophagus.
 - What are the peculiarities of/in the anatomy oesophagus that has a bearing on the radiotherapy planning?
- Describe the formation and pathway of CSF flow. 2+3+5
 - What are the indications for craniospinal irradiation?
 - Describe in detail the technique of CSI including dose schedules.
- Describe the various phases of clinical trials. 3+4+3
 - How is a patient population defined and stratification done?
 - Methods of Randomization and points of consideration when selecting end points.
- Describe in brief the effects of acute total body irradiation. 10
- Briefly describe what is meant by: 2+2+2+2+2
 - Odds Ratio and Hazards Ratio.
 - Sensitivity and Specificity of a test.
 - Positive Predictive Value and Negative Predictive Value.
 - Log Rank Test.
 - Life tables.
- What is the need of a Cancer Registry? 3+3+4
 - Describe the various types of Cancer Registries that are available.
 - Briefly describe the Cancer Registry Programme of India.

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| 7. | a) Describe the anatomy and lymphatic drainage of the stomach.
b) Describe the role of various imaging modalities in the diagnosis and a brief note on the role of radiation in the management of stomach cancers. | 4+6 |
| 8. | a) Describe the anatomy of nasopharynx.
b) Describe in detail the aetiopathogenesis of carcinoma nasopharynx.
c) What are the typical syndromes associated with Carcinoma Nasopharynx and their clinical presentations? | 3+4+3 |
| 9. | a) Briefly describe the various beam modification devices used in radiotherapy.
b) Describe in detail the various types of Wedge filters used in practice and the rationale for the use of this device. | 5+5 |
| 10. | With the help of suitable diagrams, define and describe:
a) What is meant by percentage depth dose (PDD)?
b) The various factors on which PDD depends.
c) Mayneord F Factor. | 2+5+3 |
