

Question Paper

Exam Date & Time: 25-May-2024 (10:00 AM - 01:00 PM)



MANIPAL ACADEMY OF HIGHER EDUCATION

SIXTH SEMESTER B.Sc. RADIOTHERAPY TECHNOLOGY DEGREE EXAMINATION - MAY/JUNE 2024
SUBJECT: RTT3201 - PRINCIPLES AND PRACTICE OF RADIOTHERAPY PART - II
(2020 SCHEME)

Marks: 100

Duration: 180 mins.

Answer all the questions.

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| 1) | Describe etiology, signs, symptoms, diagnosis and general management of Cancer of the cervix. | (20) |
| 2) | What are the different target volumes in radiotherapy treatment planning? Explain in detail with diagram. | (20) |
| 3) | Describe the components of palliative care in a patient with terminal cancer. | (10) |
| 4) | What are the different treatment modalities for breast cancer. | (10) |
| 5A) | Write about Offline correction And Online correction. | (5) |
| 5B) | What do you understand by Organs at Risk in radiotherapy planning. List any 4 organs with their dose constraints. | (5) |
| 5C) | Outline the management of cancer of the Oesophagus. | (5) |
| 5D) | Management of oral cavity cancers. | (5) |
| 5E) | Importance of documentation of patient records. | (5) |
| 5F) | DIBH / Respiratory Gating : advantages and disadvantages. | (5) |
| 6A) | Name any 2 nucleotides present in human DNA. | (2) |
| 6B) | Mention any 2 symptoms of cancer of lung cancers. | (2) |
| 6C) | Explain AIO base plate. | (2) |
| 6D) | Mention any 2 screening tests for cancer prevention. | (2) |
| 6E) | Define hyperfractionation. | (2) |

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Question Paper

Exam Date & Time: 28-May-2024 (10:00 AM - 12:00 PM)



MANIPAL ACADEMY OF HIGHER EDUCATION

SIXTH SEMESTER B.Sc. RADIOTHERAPY TECHNOLOGY DEGREE EXAMINATION - MAY/JUNE 2024
SUBJECT: RTT3241 - PROGRAM ELECTIVE - II : RECENT ADVANCES IN RADIOTHERAPY TECHNOLOGY
(2020 SCHEME)

Marks: 50

Duration: 120 mins.

Answer all the questions.

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| 1) | Explain tomotherapy in detail. | (10) |
| 2) | Explain in detail total skin electron therapy. | (10) |
| 3A) | What is cone beam computed tomography? Explain kVCBCT in detail. Mention the advantages and disadvantages of kVCBCT. | (5) |
| 3B) | Explain in detail in room CT scanner. | (5) |
| 3C) | Explain stereotactic frames used for radiosurgery. | (5) |
| 3D) | Explain image-guided brachytherapy. | (5) |
| 4A) | Mention any two advantages and disadvantages of segmented and dynamic MLC delivery. | (2) |
| 4B) | What is total body irradiation in radiotherapy? Why it is used? | (2) |
| 4C) | Mention the properties of multileaf collimator. | (2) |
| 4D) | What is CT simulator? Why it is used? Mention any one advantage of it. | (2) |
| 4E) | What is the need of Adaptive Radiation Therapy? | (2) |

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