

POST GRADUATE EXAMINATION, MAY - 2018

MD RADIOTHERAPY  
(PAPER ONE)

BASIC SCIENCES RELATED TO ONCOLOGY, RADIATION PHYSICS AND RADIOBIOLOGY

[Time allotted: Three hours]

[Max Marks: 100]

Note: Attempt all questions  
Illustrate with suitable diagrams.

- Q. 1. Describe in detail the anatomy of nasopharynx. Illustrate it with a diagram, along with lymphatic drainage. Write the staging system of carcinoma nasopharynx. (20)
- Q. 2. What are the beam modification devices used in modern radiotherapy practice? Illustrate with diagrams and a clinical situation of their use. (20)
- Q. 3. Describe briefly: (3 x 10 = 30)
- Oxygen effect and strategies to overcome hypoxia
  - Classification of ovarian tumors
  - Cancer prevention strategies
- Q. 4. Write short notes on: (5 x 6 = 30)
- Image guidance
  - Cancer registries in India
  - DCIS
  - Second malignant neoplasms after radiotherapy
  - MLC

X

**POST GRADUATE EXAMINATION, MAY - 2018**

**MD RADIOTHERAPY  
(PAPER TWO)**

**PRINCIPLE AND PRACTICE OF RADIOTHERAPY**

**[Time allotted: Three hours]**

**[Max Marks: 100]**

**Note:** Attempt all questions  
Illustrate with suitable diagrams.

- Q. 1.** Describe the management of average risk medulloblastoma in a 6 year old child as per current recommendations. (20)
- Q. 2.** Discuss in detail management of T<sub>2</sub>N<sub>0</sub> non-small cell carcinoma lung with emphasis on various radiotherapy techniques. (20)
- Q. 3. Describe briefly:** (3 x 10 = 30)
- Role of radiotherapy in management of carcinoma rectum. What are advantages of preop RT vs postop RT.
  - Image-based brachytherapy treatment planning in management of cancer cervix as optimal approach.
  - Role of radiotherapy in management of pituitary adenoma with emphasis on various radiotherapy modalities.
- Q. 4. Write short notes on:** (5 x 6 = 30)
- Cranio-spinal radiation, its technique indications and complications.
  - Extra nodal nasal Non Hodgkin's lymphoma.
  - Irradiation techniques in treatment of early glottic cancer.
  - Role of radiotherapy in management of Wilms tumor.
  - Cervical intraepithelial neoplasia.

X

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MD RADIOTHERAPY  
(PAPER THREE)

CHEMOTHERAPY, BIOLOGICAL THERAPY AND PALLIATIVE CARE

[Time allotted: Three hours]

[Max Marks: 100]

Note: Attempt all questions  
Illustrate with suitable diagrams.

- Q. 1. Describe the classification of antineoplastic drugs and explain in detail the management of stage III non-seminomatous germ cell testicular tumor. (20)
- Q. 2. Discuss and describe the role and evolution of adjuvant chemotherapy in Ca. Breast. Discuss the role of Herceptin and the present recommendations and schedule followed. (20)
- Q. 3. Describe briefly: (3 x 10 = 30)
- Management of NHL stage III B
  - Current management of acute myeloblastic leukaemia (AML)
  - Management of Ewing's sarcoma
- Q. 4. Write short notes on: (5 x 6 = 30)
- Anthracyclins
  - Prophylactic cranial irradiation in ALL
  - Principles of cancer pain management
  - Management of tumor lysis syndrome
  - Phase of clinical trial - Aims and objectives

X

**POST GRADUATE EXAMINATION, MAY - 2018**

**MD RADIOTHERAPY  
(PAPER FOUR)**

**RECENT ADVANCES IN RADIOTHERAPY AND ONCOLOGY**

**[Time allotted: Three hours]**

**[Max Marks: 100]**

**Note:** Attempt all questions  
Illustrate with suitable diagrams.

- Q. 1.** Describe the principles of delivery IGRT in clinical practice. Discuss the few important clinical trials supporting the use of this modality. (20)
- Q. 2.** What is adaptive radiotherapy? Discuss the benefits and limitations of adaptive radiotherapy. (20)
- Q. 3. Describe briefly:** (3 x 10 = 30)
- a. Role of hyperthermia in oncology
  - b. Role of hypo-fractionation in oncology
  - c. Role of PET-CT in oncology
- Q. 4. Write short notes on:** (5 x 6 = 30)
- a. HPV virus in carcinoma oral cavity
  - b. Electronic medical record
  - c. Kaplan-Meir survival analysis
  - d. Proton beam therapy
  - e. Tyrosine-kinase inhibitors

X