

DIPLOMA IN MEDICAL RADIO THERAPY (DMRT) EXAMINATION

**GENERAL PRINCIPLES OF RADIO THERAPY INCLUDING
RADIO-BIOLOGY AND ONCOLOGY**

Q.P. Code: 343026

Time: Three Hours

Maximum: 100 Marks

I. Elaborate on: **(2 x 15 = 30)**

1. Define stereotactic radiotherapy and stereotactic radiosurgery. What are the radiobiologic considerations in relation to above? Describe in brief radiosurgical techniques employed in treatment of tumor.
2. Describe the radiation treatment techniques available for a 9 year old boy diagnosed to have Craniopharyngioma. Explain the techniques briefly along with dose constraints of Organs at Risk (OAR).

II. Write notes on: **(10 x 7 = 70)**

1. Risk stratification and seminoma and non-seminomatous testicular tumours.
2. Luminal classification of breast cancer and its significance in the management of breast cancer.
3. Discuss the rationale for chemoirradiation in carcinoma cervix.
4. Use of PET CT in radiotherapy planning.
5. Analyse the importance of Time, Distance and Fractionation in Radiotherapy.
6. Indications for radiotherapy in benign conditions. Discuss any one condition in detail with technique and radiotherapy prescription.
7. Discuss the indications for external beam radiotherapy and vaginal mold brachytherapy for carcinoma of endometrium.
8. Role of radiotherapy in carcinoma maxillary antrum. Discuss the radiation treatment and technique with suitable diagram.
9. Immunohistochemistry of malignant round cell tumour in making definite diagnosis.
10. Cyber knife.
