

# Question Paper

Exam Date & Time: 09-Dec-2019 (02:00 PM - 05:00 PM)



## MANIPAL ACADEMY OF HIGHER EDUCATION

FIFTH SEMESTER B.Sc. MEDICAL RADIOTHERAPY TECHNOLOGY DEGREE EXAMINATION - DECEMBER 2019

SUBJECT: BRTT 301/BMRT 301 - PRINCIPLES AND PRACTICE OF RADIOTHERAPY: PART I

(2016 RV/2016 SCHEME)

Monday, December 09, 2019 (14.00 - 17.00)

Marks: 100

Duration: 180 mins.

Answer all the questions.

- 1) What do you understand by multidisciplinary approach to cancer? (20)
- 2) Discuss Acute and Late effects of Radiation therapy. (20)
- 3) Complications associated with cancer and its treatment. (10)
- 4) Staging of Cancer (10)
  
- 5) **Write short essays on:**
- 5A) Altered Fractionation Schedules (5)
- 5B) Brachytherapy (5)
- 5C) Physical effects of neoplasia on the body (5)
- 5D) Cobalt 60 (5)
- 5E) Simulation and Reduplication of setup (5)
- 5F) Prevention of Acute side effects of Radiotherapy (5)
  
- 6) **Write short notes on:**
- 6A) Iridium 192 (2)
- 6B) 4 R's of radiobiology (2)
- 6C) Physical effects of Chemotherapy (2)
- 6D) Clinical Symptoms of Cancer (2)
- 6E) Define Neoplasia, add a note on its development within the patient. (2)

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# Question Paper

Exam Date & Time: 05-Dec-2019 (02:00 PM - 04:00 PM)



## MANIPAL ACADEMY OF HIGHER EDUCATION

FIFTH SEMESTER B.Sc. MEDICAL RADIOTHERAPY TECHNOLOGY DEGREE EXAMINATION - DECEMBER 2019

SUBJECT: BRTT 303/BMRT 303 - RECORD KEEPING

(2016 RV/2016 SCHEME)

Thursday, December 05, 2019 (14.00 - 16.00)

Marks: 50

Duration: 120 mins.

Answer all the questions.

- 1) What are the purposes of Medical Records? (10)
- 2) Write a short note on numbering systems used in Health Care facilities. (10)
- 3A) Explain about the formats of Medical Records. (5)
- 3B) What are the contents of Medical Records? (5)
- 3C) What are the rules involved in form designing? (5)
- 3D) Write a short note on Medical Record analysis. (5)
- 4A) Define Medical Records. (2)
- 4B) Define filing system used in Medical Record. (2)
- 4C) What are the indexes usually maintained in all the hospitals? (2)
- 4D) What are the important registers maintained in all the hospitals? (2)
- 4E) What are the types of filing systems used in Medical Records? (2)

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# Question Paper

Exam Date & Time: 07-Dec-2019 (02:00 PM - 05:00 PM)



## MANIPAL ACADEMY OF HIGHER EDUCATION

FIFTH SEMESTER B.Sc. RADIOTHERAPY TECHNOLOGY/B.Sc. MEDICAL RADIOTHERAPY TECHNOLOGY DEGREE EXAMINATION - DECEMBER 2019

SUBJECT: BRTT 305/BMRT 305 - RADIATION SAFETY

(2016 RV/2016 SCHEME)

Saturday, December 07, 2019 (14.00 - 17.00)

Marks: 100

Duration: 180 mins.

### Answer all the questions.

- 1A) Write the specifications of Ir-192 brachytherapy source and briefly explain any two QA test performed in brachytherapy. (20)
- 1B) Define half-life and mean life. Derive equation for half-life and relationship between half-life and mean life. (20)
- 2A) Discuss briefly responsibility of licensee. (10)
- 2B) Discuss the factor to be taken into account for calculating the wall thickness for Teletherapy installation. (10)
- 3A) Write a short note on personal monitoring instruments. (5)
- 3B) Write short note on somatic and hereditary effect. (5)
- 3C) Define Kerma and Kerma Rate. (5)
- 3D) Mention the recommended dose limits for both occupational workers and public. (5)
- 3E) Write a short note on Annual Limit of Intake(ALI) Derived Air Concentration. (5)
- 3F) Briefly explain the need of radiation protection. (5)
- 4A) Define radiation weighting factor (2)
- 4B) Define inverse square law (2)
- 4C) Define flux (2)
- 4D) Define LD 50/60 (2)
- 4E) What are the advantages of film dosimeter? (2)

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