

Reg. No.

**MANIPAL ACADEMY OF HIGHER EDUCATION**  
**SECOND YEAR B.Sc. M.R.T. DEGREE EXAMINATION – JUNE 2018**  
**SUBJECT: GENERAL AND APPLIED PATHOLOGY**  
**(2011 SCHEME)**

Thursday, June 21, 2018

Time: 10:00-11:30 Hrs.

Max. Marks: 40

 **Answer ALL questions.**

1. Describe aetiology, clinical features and morphology of tuberculosis.

(1+3+4 = 8 marks)

2. Define necrosis. Describe the types of necrosis with examples.

(1+6 = 7 marks)

3. **Write short notes on:**

3A. Factors influencing wound healing

3B. Hemophilia

3C. Chemotaxis

3D. Definition and types of infarction

3E. Metastasis of tumours

(5 marks × 5 = 25 marks)



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**SECOND YEAR B.Sc. M.R.T. DEGREE EXAMINATION – JUNE 2018**

**SUBJECT: RADIATION PHYSICS**  
**(2011 SCHEME)**

Friday, June 22, 2018

Time: 10:00-13:00 Hrs.

Max. Marks: 80

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**PART: A**

1. **Answer ALL the questions:**

- 1A. Define absorbed dose and exposure.
- 1B. Write a short note on proportional counters.
- 1C. Write briefly about effect of filters on patient exposures.
- 1D. Discuss about continuous and characteristic spectrum of radiation.
- 1E. Define HALF-LIFE derive the equation for the same
- 1F. Write a short note on pair production

(5 marks × 6 = 30 marks)

**PART: B**

2. **Answer any FIVE of the following questions:**

- 2A. Define radioactivity and derive the equation  $A = A_0 e^{-\lambda t}$
- 2B. Describe the principle and operation of gas filled detectors.
- 2C. Explain briefly different modes of decay.
- 2D. Write in detail about liquid scintillation detectors.
- 2E. Write in detail about free air ion chamber.
- 2F. Describe Construction and working of GM counter.

(10 marks × 5 = 50 marks)



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**MANIPAL ACADEMY OF HIGHER EDUCATION**  
**SECOND YEAR B.Sc. M.R.T. DEGREE EXAMINATION – JUNE 2018**  
**SUBJECT: PRINCIPLES AND PRACTICE OF RADIOLOGY**  
**(2011 SCHEME)**

Monday, June 25, 2018

Time: 10:00-13:00 Hrs.

Max. Marks: 80

**☞ Draw diagrams wherever required**

**1. Answer any FIVE questions from the following:**

- 1A. Enumerate the properties of x rays.
- 1B. Describe briefly features of characteristic curve.
- 1C. Explain the methods of silver recovery.
- 1D. Explain the positioning and basic views for scapula bone.
- 1E. Write a note on Digital Subtraction Angiography.
- 1F. Discuss generations of CT.

(10 marks × 5 = 50 marks)

**2. Answer all the questions:**

- 2A. Discuss about the construction and types of x ray films.
- 2B. Enumerate the factors affecting development and fixing of radiographic film.
- 2C. Describe x ray tubes.
- 2D. Describe characteristics of radiographic image.
- 2E. Write the positioning and basic views for chest.
- 2F. Differentiate Manual and Automatic photographic film processing.

(5 marks × 6 = 30 marks)

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**MANIPAL ACADEMY OF HIGHER EDUCATION****SECOND YEAR B.Sc. M.R.T. DEGREE EXAMINATION – JUNE 2018****SUBJECT: (A) HOSPITAL PRACTICE AND PATIENT CARE (B) RECORD KEEPING  
(2011 SCHEME)**

Tuesday, June 26, 2018

Time: 10:00-13:00 Hrs.

Max. Marks: 80

**SECTION – A: HOSPITAL PRACTICE AND PATIENT CARE (40 MARKS)****1. Answer any FOUR of the following questions:**

- 1A. What are the lifting and moving techniques used for cancer patients in radiotherapy?
- 1B. What instruction patient has to follow during and after radiotherapy?
- 1C. What are the universal precautions to be undertaken in the hospital?
- 1D. What are the reasons for female urinary retentions? Explain the types of drainage systems.
- 1E. Enumerate the differences between acute and late side effects and also explain the side effects related to radiation.

(10 marks × 4 = 40 marks)

**SECTION – B: RECORD KEEPING (40 MARKS)****2. Answer any FOUR of the following questions:**

- 2A. Define medical record.
- 2B. Write the values of medical record for international health organization.
- 2C. What is the goals and objectives of medical records?

(2+4+4 = 10 marks)

- 3A. Explain the unit numbering system in medical record management.
- 3B. Mention two types of data in a medical record form and explain them.

(5+5 = 10 marks)

- 4A. Write the name of personalities who gave contributed to history of medicine.
- 4B. Write a short note on evidence and registers in medical record.

(5+5 = 10 marks)

- 5A. Write the procedure of flow of outpatient record in a hospital.
- 5B. How medical records are maintained in medical record department?

(5+5 = 10 marks)

- 6A. Describe the need of computerized of medical record.
- 6B. Explain the integrated medical record.

(5+5 = 10 marks)

