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MANIPAL UNIVERSITY

SECOND YEAR M.Sc. M.I.T. DEGREE EXAMINATION – JUNE 2015

SUBJECT: MANAGEMENT OF HEALTHCARE ORGANIZATION
(2012 SCHEME)

Monday, June 01, 2015

Time: 10:00 – 13:00 Hrs.

Maximum Marks: 80

1. Define Biomedical Waste. Write briefly on the available guidelines/law for proper disposal of Hospital waste.

(5+15 = 20 marks)

✍ **Write short notes on the following questions:**

- 2A. Laboratory Information System (HIS)
2B. Recommendations of Bhore Committee
2C. ABC Analysis
2D. Leadership styles
2E. Gratuity Act
2F. Hospital statistics

(10 marks × 6 = 60 marks)



MANIPAL UNIVERSITY**SECOND YEAR M.Sc. M.I.T. DEGREE EXAMINATION – JUNE 2015****SUBJECT: ADVANCED TECHNIQUE AND INSTRUMENTATION OF MRI
(2012 SCHEME)**

Wednesday, June 03, 2015

Time: 10:00 – 13:00 Hrs.

Maximum Marks: 80

✍ **Answer ALL the questions.**

✍ **Draw suitable diagrams wherever required.**

✍ **Major questions:**

1. Write a detailed note on phase contrast MRA. Mention advantage and disadvantage of PC MRA over TOF MRA.

(20 marks)

2. **Short answers:**

2A. Write a note on use of paramagnetic agents as enhancement agent in MRI with example.

2B. What is specific absorption rate? Explain the factor determine amount of SAR. Compare the SAR for spin echo and gradient echo with reason.

2C. Write a note on scan time in MRI.

2D. Write a note on RF spoiling and gradient spoiling during incoherent gradient echo imaging.

2E. Define flow phenomena. Explain Time of flight phenomena in detail.

2F. Write a note on chemical misregistration including appearance, cause and remedy.

(10 marks × 6 = 60 marks)



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MANIPAL UNIVERSITY

SECOND YEAR M.Sc. M.I.T. DEGREE EXAMINATION – JUNE 2015

SUBJECT: INTERVENTIONAL RADIOLOGY TECHNIQUES
(2012 SCHEME)

Friday, June 05, 2015

Time: 10:00 – 13:00 Hrs.

Maximum Marks: 80

✍ **Major question:**

1. Explain quality assurance in DSA and acceptable limits of variation and corrective action taken.

(20 marks)

2. **Short answers:**

- 2A. Why and how is percutaneous biliary drainage performed?
- 2B. Explain angiographic room design and radiation protective measures employed.
- 2C. Write a note on emergency treatment for contrast reactions during angiographic procedures and add a note on informed consent.
- 2D. Describe the procedure vertebroplasty in detail.
- 2E. Mention and explain basic principles of sterile technique.
- 2F. Explain uterine artery embolization.

(10 marks × 6 = 60 marks)



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MANIPAL UNIVERSITY

SECOND YEAR M.Sc. M.I.T. DEGREE EXAMINATION – JUNE 2015

SUBJECT: CARE OF PATIENTS IN DIAGNOSTIC RADIOLOGY

(2012 SCHEME)

Monday, June 08, 2015

Time: 10:00 – 13:00 Hrs.

Maximum Marks: 80

✍ **Answer ALL questions.**

1. Define and classify fractures. List the precautions taken in handling patients with possible fractures of spines and extremities.

(20 marks)

2. **Write short notes on:**

2A. Electrocardiograph

2B. Biohazard waste and necessary steps taken to handle and disposal of contaminated items and waste

2C. Patient care in cardiac arrest

2D. Techniques of obtaining the vital signs

2E. Dealing with emergencies condition with asthma patient

2F. Informed consent

(10 marks × 6 = 60 marks)



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MANIPAL UNIVERSITY

SECOND YEAR M.Sc. M.I.T. DEGREE EXAMINATION – JUNE 2015

SUBJECT: RADIATION EVALUATION & PROTECTION IN DIAGNOSTIC RADIOLOGY
(2012 SCHEME)

Wednesday, June 10, 2015

Time: 10:00 – 13:00 Hrs.

Maximum Marks: 80

✍ **Answer ALL the questions:**

✍ **Essay:**

1. Explain about the guidelines for obtaining regulatory consents from AERB for medical diagnostic X-ray equipment's.

(20 marks)

2. **Write short notes on:**

- 2A. Explain about the importance of personnel radiation monitoring and add a note on TLD
- 2B. Discuss about the effects of antenatal exposure
- 2C. Enumerate and explicate the radiation protection measures during Computed Tomography
- 2D. Give detail notes about “Equivalent Dose” and “Effective Dose”
- 2E. Elucidate the Radiation Energy Transfer determinants
- 2F. Explicate the Direct action of Ionizing Radiation

(10 marks × 6 = 60 marks)



MANIPAL UNIVERSITY**SECOND YEAR M.Sc. M.I.T. DEGREE EXAMINATION – JUNE 2015****SUBJECT: NUCLEAR MEDICINE IMAGING TECHNIQUE
(2012 SCHEME)**

Friday, June 12, 2015

Time: 10:00 – 13:00 Hrs.

Maximum Marks: 80

✍ Answer ALL the questions.**✍ Major Questions:**

1. A patient has been referred for the assessment of renovascular hypertension. Discuss your diagnostic approach.

(20 marks)

✍ Short notes:

- 2A. Bone marrow imaging
2B. In vivo static and dynamic imaging studies
2C. Advances in radioimmunotherapy
2D. Radioactive decay
2E. ALARA concept in nuclear medicine
2F. Management of radioactive materials before, during and after clinical usage

(10 marks × 6 = 60 marks)

