

# Question Paper

Exam Date & Time: 24-May-2022 (10:00 AM - 01:00 PM)



## MANIPAL ACADEMY OF HIGHER EDUCATION

FOURTH SEMESTER B.Sc. MEDICAL IMAGING TECHNOLOGY DEGREE EXAMINATION - MAY 2022  
SUBJECT: MIT2201- RADIATION SAFETY IN RADIODIAGNOSIS  
(2020 SCHEME)

Answer ALL questions.

Marks: 100

Duration: 180 mins.

- 1) Describe the construction, working, advantages and disadvantages of personnel monitoring devices (20)
- 2) Describe in detail the biological effects of Radiation (20)
- 3) Illustrate Primary and secondary barriers (10)
- 4) Outline the design and shielding requirements for diagnostic X-ray facilities (10)
- 5A) Write a note on the radiation dose limit to occupation workers (5)
- 5B) Write a note on radioactivity (5)
- 5C) What is the need of radiation protection (5)
- 5D) What are the effects of exposure factors in radiation dose? (5)
- 5E) List the types of radiation monitoring devices (5)
- 5F) Write a note on exposure in Children (5)
- 6A) Define LD50 (2)
- 6B) Define OER (2)
- 6C) What is ICRP? (2)
- 6D) Define cardinal principle of Radiation protection (2)
- 6E) Define DLP (2)

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# Question Paper

Exam Date & Time: 30-May-2022 (10:00 AM - 12:00 PM)



## MANIPAL ACADEMY OF HIGHER EDUCATION

FOURTH SEMESTER B.Sc. MEDICAL IMAGING TECHNOLOGY DEGREE EXAMINATION - MAY 2022  
SUBJECT: MIT 2241-PROGRAM ELECTIVE-I - ADVANCED IMAGE GUIDED PROCEDURES  
(2020 SCHEME)

Marks: 50

Duration: 120 mins.

Answer all the questions.

- 1) Illustrate the anatomy of biliary tree. Explain the procedure of T-tube cholangiography in detail. (10)
- 2) Explain the procedure for coronary angioplasty. (10)
- 3A) Briefly explain the procedure and filming techniques of Percutaneous Transhepatic Biliary Drainage. (5)
- 3B) What is pigtail insertion? Add a note on the equipment required and the procedure for pigtail insertion. (5)
- 3C) Classify embolic agents along with examples used in interventional radiology. (5)
- 3D) Write a short note on the anatomy of the Circle of Willis with a neat labelled diagram. (5)
- 4A) Define angiography. (2)
- 4B) List the indications of phlebography. (2)
- 4C) Outline the patient preparation for uterine artery embolization. (2)
- 4D) Name the types of IVC filter. (2)
- 4E) What are the indications and contraindications for image guided nerve block procedures. (2)

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