

Question Paper

Exam Date & Time: 01-Jun-2024 (10:00 AM - 01:00 PM)



MANIPAL ACADEMY OF HIGHER EDUCATION

FOURTH SEMESTER B.Sc. MIT DEGREE EXAMINATION - MAY/JUNE 2024
SUBJECT: MIT2201 - RADIATION SAFETY IN RADIO DIAGNOSIS
(2020 SCHEME)

Marks: 100

Duration: 180 mins.

Answer all the questions.

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| 1) | Discuss the cardinal principles of radiation protection in details. Explain the methods to reduce the radiation dose in fluoroscopy. | (20) |
| 2) | Explain in detail acute radiation syndrome. | (20) |
| 3) | Explain in detail about area monitoring devices. | (10) |
| 4) | Outline the design and working principle of film badge in detail. | (10) |
| 5A) | Explain occupancy factor and use factor. | (5) |
| 5B) | Explain in detail about filters used in radiography. | (5) |
| 5C) | Compare deterministic and stochastic effects of radiation. | (5) |
| 5D) | Illustrate primary and secondary barriers. | (5) |
| 5E) | Discuss in detail the radiation precaution measures taken for female patients. | (5) |
| 5F) | Explain the technical protective considerations in general radiography. | (5) |
| 6A) | Define prenatal effects of radiation. | (2) |
| 6B) | Define radiation weighting factor. | (2) |
| 6C) | Define MPD and state the whole-body dose for occupational worker and public. | (2) |
| 6D) | Define DLP. | (2) |
| 6E) | List the natural and artificial sources of radiation. | (2) |

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Question Paper

Exam Date & Time: 05-Jun-2024 (10:00 AM - 12:00 PM)



MANIPAL ACADEMY OF HIGHER EDUCATION

FOURTH SEMESTER B.Sc. MIT DEGREE EXAMINATION - MAY/JUNE 2024
SUBJECT: MIT2241 - PROGRAM ELECTIVE - I : ADVANCED IMAGE GUIDED PROCEDURES
(2020 SCHEME)

Marks: 50

Duration: 120 mins.

Answer all the questions.

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| 1) | Discuss in detail the radiological procedure of Angioplasty | (10) |
| 2) | Explain in detail about the radiological procedure of Vertebroplasty and Kyphoplasty | (10) |
| 3A) | Define embolization. Add a note on types and classification of the embolic agent | (5) |
| 3B) | Explain in detail about the radiological procedure of T-tube cholangiography | (5) |
| 3C) | List the patient preparation and equipment used for TIPS | (5) |
| 3D) | Explain in detail about the radiological procedure of TACE | (5) |
| 4A) | List the complication and after care for IVC filter placement | (2) |
| 4B) | Recall the anatomy related to PTC. | (2) |
| 4C) | List the equipment used and patient preparation for nerve block procedure | (2) |
| 4D) | List the indication and contraindication of lower limb angiography | (2) |
| 4E) | List the equipment used and patient preparation for PTBD | (2) |

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