

Reg. No.

MANIPAL ACADEMY OF HIGHER EDUCATION

SECOND SEMESTER M.Sc. M.I.T. DEGREE EXAMINATION – MAY/JUNE 2018

SUBJECT: MIT 202: ADVANCED TECHNIQUES & INSTRUMENTATION OF COMPUTED TOMOGRAPHY

Saturday, June 02, 2018

Time: 10:00 – 13:00 Hrs.

Maximum Marks: 80

✍ **Answer ALL the questions.**

✍ **Major question:**

1. Explain the Indications, techniques and procedure for CT Coronary Angiography. Add a note on anatomy of the coronary arteries.

(20 marks)

2. **Write short notes on:**

2A. CT Perfusion imaging

2B. Recent advancements in CT equipment and design

2C. Advancements in CT post-processing software and tools

2D. CT protocol for Interstitial lung disease

2E. CT Fluoroscopy

2F. CT protocol for Neck masses

(10 marks × 6 = 60 marks)



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SECOND SEMESTER M.Sc. M.I.T. DEGREE EXAMINATION – MAY/JUNE 2018

SUBJECT: MIT 201: ADVANCED TECHNIQUES & INSTRUMENTATION OF ULTRASOUND

(2015 SCHEME)

Thursday, May 31, 2018

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 ultrasound image quality and optimization techniques.

(20 marks)

2. Short answers:

2A. Write a note on factors affecting velocity of ultrasound and assumption during ultrasonography. Explain possible artifact due to this assumption.

2B. Write a short essay on “Selecting an appropriate ultrasound probe”.

2C. Write a note on grades and imaging features of fatty liver diseases in ultrasound.

2D. Write a note on bio effects and safety considerations during ultrasonography.

2E. Write a note on extended field of view imaging.

2F. Write a note on factor affecting reflection of ultrasound beam and mention different types of reflector with example.

(10 marks × 6 = 60 marks)

