

No. of Printed Pages : 02

Roll No.

G103

B. Tech. EXAMINATION, 2020

(Seventh Semester)

(B Scheme) (Main & Re-appear)

(BME)

BME405B

MEDICAL IMAGING-II

Time : 2½ Hours]

[Maximum Marks : 75

Before answering the question-paper candidates should ensure that they have been supplied to correct and complete question-paper. No complaint, in this regard, will be entertained after the examination.

Note : Attempt *Four* questions in all. All questions carry equal marks.

1. Define Sonography. Explain the principle and instrumentation of it.
2. Explain different diagnostic scanning modes of Ultrasound with example.
3. Discuss the process of generation and detection of NMR signal in detail.
4. Explain the following in regard of MRI :
 - (a) Magnetization
 - (b) Magnetic field gradients.
5. What are the types of radionuclides used in SPECT ? Explain the SPECT scanners.
6. Explain the different types of radioactive decays.
7. What do you mean by radiation induced carcinogenesis ? Explain in detail at cellular and molecular levels both.
8. What are the different methods of exposure control ? Also discuss the methods of prevention of errors in radiology.