

No. of Printed Pages : 03

Roll No.

G-102

B. Tech. EXAMINATION, Dec. 2018

(Seventh Semester)

(B. Scheme) (Main & Re-appear)

(BME)

BME403B

NUCLEAR MEDICINE RADIATION AND
SAFETY

Time : 3 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 *Five* questions in all, selecting at least *one* question from each Unit. All questions carry equal marks.

(3-18/19)M-G-102

P.T.O.

Unit I

1. Write notes on the following : **3×5=15**
 - (a) Gas filled detector
 - (b) Semiconductor detectors
 - (c) Beta Decay.
2. Discuss the properties and applications of Positron decay and Electron capture in Nuclear Medicine. **15**

Unit II

3. Explain the construction and working of Gamma Camera. **15**
4. How are radiopharmaceuticals selected and localized for imaging of radioisotopes ? Explain rectilinear scanners. **15**

Unit III

5. Write notes on the following : **3×5=15**
 - (a) Double isotope method
 - (b) Radioimmunoassay
 - (c) Principle of PET.

6. Discuss the principle and applications of SPECT. **15**

Unit IV

7. Explain the role of computers in Nuclear medicine. **15**
8. What is Radiation Dosimetry ? Discuss its types. **15**