



AJEENKYA

D Y PATIL UNIVERSITY

End Term Examinations (April 2019)

School: School of Engineering

Program: M.Tech (Bio-engineering)

Course: Medical Imaging Techniques and Analysis

Course Code: BEN515

Semester: II

Max Marks: 35

Duration (mins): 120

Note: 1. Figures to the right indicates full marks.

- Q 1.** (a) Explain heat production, Characteristic radiation and bremsstrahlung radiation in detail. [10]
or
(b) Explain each generations of CT with diagram. [10]
- Q 2.** (a) Explain the working principle of magnetic resonance imaging [10]
or
(b) Explain image intensification of fluoroscopy: image intensifier and multi-field intensification. [10]
- Q 3.** (a) Explain the design of PET scanner used in medical imaging. [10]
or
(b) State the difference between PET and SPECT. [10]
- Q 4.** Explain the following terms: [5]
(a) Radionuclide
(b) Positron
(c) Isotope
(d) Nuclear Activity
(e) Half-Life