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MANIPAL INSTITUTE OF TECHNOLOGY

MANIPAL

A Constituent Institution of Manipal University

VI SEMESTER B.Tech.(BME) DEGREE END SEM EXAMINATIONS, APRIL/MAY 2017

SUBJECT: BASIC CLINICAL SCIENCES III (BME 3201)
(REVISED CREDIT SYSTEM)

Saturday, 22nd April, 2017 : 2 to 5 pm

TIME: 3 HOURS

MAX. MARKS: 100

Instructions to Candidates:

- 1. Answer ALL questions from PART-A, PART-B and PART-C. Use separate answer books for PART-A, PART-B and PART-C.**
- 2. Draw labeled diagram wherever necessary.**

PART- A. RADIOLOGY (Max. Marks 30)

- Q1) Define radiographic quality. Enumerate factors affecting Radiographic Quality. 10
Describe any four in detail.
- Q2) What are the types of digital Radiography? Describe any one type in detail. 10
- Q3) Enumerate the equipment's used in mammography. What is the target material/s and focal spot size in mammography? Describe about the film screen combination used in mammography. 10

PART- B. RADIOTHERAPY. (Max. Marks 40)

- Q1) Describe the mechanism of action of radiation on human cells? Mechanism of DNA repair. 10
- Q2) What is fractionation? List the various schedules of fractionation and describe any one in detail. 10
- Q3) Describe in detail the four "R"s of radiobiology. 10
- Q4) Describe Therapeutic Ratio. List the various methods to improve therapeutic ratio. 10

PART-C. NEUROLOGY (Max. Marks 30)

- Q1) Describe anatomy of the spinal cord with anatomy and functions of the various tracts. 10
- Q2) Enumerate the cranial nerves and the functions they subserve. 10
- Q3) Describe the technique of visual evoked potential its utility and interpretation. 10