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## MANIPAL INSTITUTE OF TECHNOLOGY

(A constituent unit of MAHE, Manipal 576104)

**VI SEM B.Tech.(BME) DEGREE GRADE IMPROVEMENT EXAMINATIONS, JAN 2021**

**SUBJECT: BASIC CLINICAL SCIENCES III (BME 3201)**

**(REVISED CREDIT SYSTEM)**

**Wednesday, 6<sup>th</sup> January 2021: 2 pm to 5 pm**

**TIME: 3 HOURS**

**MAX. MARKS: 50**

**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 neat labeled diagram wherever necessary.

**PART- A: RADIOLOGY (Max. Marks 15)**

1. Draw a neat labelled diagram of an Image intensifier and explain the function of each part 5
2. What are the effects of scatter radiation and mention methods to overcome scatter radiation? 5
3. Draw a neat labelled diagram of film and intensifying screen. 5

**PART- B: RADIOTHERAPY. (Max. Marks 20)**

1. Define Acute Radiation Syndrome. Enumerate the various sub syndromes. 2+3
2. What are the 5 R's of Radiotherapy? 5
3. Explain the mechanism of Radiation Carcinogenesis? 5
4. Brief about Linac components with necessary block diagram. 5

**PART-C: NEUROLOGY (Max. Marks 15)**

1. Enumerate cranial nerves and write a short note on its functions 5
2. Explain Lobes of brain and its functions 5
3. Explain Nerve conduction studies and write its clinical application. 5