Reg. No.										

MANIPAL UNIVERSITY

FIRST SEMESTER B.Sc. M.I.T. DEGREE EXAMINATION – JUNE 2017

SUBJECT: MIT 101T: RADIATION PHYSICS

(2014 SCHEME)

Thursday, June 15, 2017

Time: 10.00-13.00 Hrs. Max. Marks: 80

- **Answer ALL the questions.**
- **Draw diagrams wherever required.**

1. **Explain in detail:**

1A. Explain in detail rectification and its types.

1B. Describe briefly construction of x ray department. Add a note on radiation protection and regulations followed in radiography department.

(15 marks × 2 = 30 marks)

2. **Write short notes on the following:**

2A. Radioactivity and modes of decay

2B. Properties of x rays

2C. Interaction of x rays with matter

2D. Pocket dosimeter

2E. Factors affecting intensity and quality of x rays

2F. Grid controlled x ray tube

(5 marks × 6 = 30 marks)

3. **Discuss the following:**

3A. Radiation units

3B. Line focus principle

3C. Collimators

3D. Transformer loss

(5 marks × 4 = 20 marks)