

[LP 1019]

OCTOBER 2019

Sub. Code: 4011

**M.Sc. MEDICAL PHYSICS DEGREE EXAMS  
FIRST YEAR  
PAPER I – RADIATION PHYSICS**

*Q.P. Code : 284011*

**Time : Three hours**

**Maximum : 100 marks**

**I. Elaborate on :**

**(2 x 20 = 40)**

1. Explain the method of neutron interaction with matter and energy transfer.
2. Discuss various models of atomic structures and bring put merits and demerits of each model.

**II. Write notes on :**

**(10 x 6 = 60)**

1. What is mass defect and explain?
2. Explain about nuclear shell model.
3. Distinguish between mutual and self-induction.
4. Explain about beta positive decay with example.
5. Write about artificial radioactivity.
6. Explain about radiation weighting factor.
7. Explain about secular equilibrium with example.
8. What is radiative collision?
9. Write about Bragg curve.
10. The tissue exposed with exposure level of 10 R/min. Calculate the absorbed dose to the tissue.

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