



Shree H.N.Shukla group of colleges

PHYSICS

T.Y.B.Sc. (Sem. VI) (CBCS)

Unit Test examination

PAPER- 601

UNIT - 3 : INTERACTION OF RADIATION WITH MATTER

DATE :

TOTAL MARKS : 30

Instructions: All questions are compulsory.

The right side figure indicates total marks of the question.

Draw the figure wherever necessary.

Write answers of all the questions in main answer sheets.

SECTION-A

Q.1: One marks questions:

[5 MARKS]

- 1 The GM counter must be utilised In the _____ region .
- 2 (n, α) reaction is belong to class transmutation by _____.
- 3 In pair production _____ disappear and electron hole pair produced.
- 4 _____, _____, _____ are heavy charged particles.
- 5 An ionization chamber is much less sensitive to _____ particles.

SECTION – B

Q.2 (A): Short Questions: Write all three : [2 Marks each]

[6 MARKS]

- 1 Write two reaction of (α, p) .
- 2 Write two reaction of (n, γ) .
- 3 Write any two reaction by alpha particles.

Q.2 (B) : Short questions: Write all three: [3 Marks each]

[9 MARKS]

- 1 Explain the working of solid state detector.
- 2 Describe the characteristics of GM counter.
- 3 Explain Photomultiplier.

Q.2 (C): Write Detail Note on [Any two]: [5 Marks each]

[10 MARKS]

- 1 Describe the interaction between energetic particle and matter.
- 2 Obtain the Q value for nuclear reaction.
- 3 Explain nuclear transmutation.
- 4 Explain conservation laws in nuclear reaction.