



Shree H.N. Shukla group of colleges

PHYSICS

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

Unit Test examination

PAPER- 502

UNIT 3 ,4 - POTENTIAL & RADIATION

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 direction of magnetic field of a point charge is always _____ to the electric field.
- 2 The advance time = _____.
- 3 In the coulomb gauge = _____.
- 4 The total power radiated from the sphere is independent of the _____ sphere .
- 5 For a non relativistic particle the total power radiated by _____ - formula.

SECTION – B

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

[6 MARKS]

- 1 find the potential of a point charge moving with constant velocity.
- 2 Calculate the electric field of a point charge moving with constant velocity.
- 3 Explain : Electromagnetic waves.

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

[9 MARKS]

- 1 Write equation of V and A in terms of d almebertian operator.
- 2 Explain : Coulomb gauge.
- 3 Explain the blueness of sky.

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

[10 MARKS]

- 1 Explain magnetic dipole radiation and derive expression of E and B.
- 2 Discuss power radiated by a point charge obtain Larmor formula.
- 3 Write a note on Lienard Wiechert potential.
- 4 Write a note on fields of a moving charge .