



## Shree H.N.Shukla group of colleges

PHYSICS

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

Unit Test examination

PAPER- 502

UNIT 1,2 - ELECTRODYNAMICS & EM WAVES

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 flux for motional emf = \_\_\_\_\_
- 2 Ampere's law in integral form= \_\_\_\_\_.
- 3 The unit of inductance is \_\_\_\_\_.
- 4 Write a formula between wavelength and wave number.
- 5 What is angular frequency?

### SECTION – B

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

**[6 MARKS]**

- 1 Write classical wave equation.
- 2 Define : transverse waves.
- 3 Define : standing waves .

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

**[9 MARKS]**

- 1 Explain monochromatic plane waves.
- 2 Derive continuity equation.
- 3 What is wave ? Explain.

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

**[10 MARKS]**

- 1 Discuss wave equation.
- 2 Explain boundary condition for EM waves.
- 3 Obtain the formula for radiation pressure.
- 4 Derive Poynting's theorem.