



Shree H.N.Shukla group of colleges

PHYSICS

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

Unit Test examination

PAPER- 501

UNIT 1 - FOURIER SERIES

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 What is fourier series?
- 2 Write equation of forurier series.
- 3 Sine series is also known as _____ series.
- 4 Write equation of coeffieicent a_0, a_n .
- 5 Write equation of co eeficient b_n .

SECTION – B

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

[6 MARKS]

- 1 Write sine series .
- 2 Write Cosine series .
- 3 Write drichlet's condition.

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

[9 MARKS]

- 1 Write fourier cosine series as function of $2l$.
- 2 Obtain fourier complex series.
- 3 Explain properties of dirac delta function.

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

[10 MARKS]

- 1 Write fourier as function of $2l$.
- 2 Obtain full wave rectifier as application of fourier series.
- 3 Explain in detail fourier integral.
- 4 Obtain half wave rectifier as application of fourier series.