



UNIVERSITY OF NORTH BENGAL
B.Sc. Honours 1st Semester Examination, 2020

CC1-PHYSICS

MATHEMATICAL PHYSICS-I

Full Marks: 40

ASSIGNMENT

*The figures in the margin indicate full marks.
All symbols are of usual significance.*

*For each question, the candidates will be graded according to the quality of the presentation of the topic (8 marks), and originality of language (2 marks).
Maximum word limit of each topic is 400*

Write short notes on any four of the following topics

10×4 = 40

1. General solution of a second order ordinary differential equation.
2. Rotation of coordinate axes and properties of vector under rotation.
3. Gauss' divergence theorem: theory and applications.
4. Spherical polar coordinates as an example of curvilinear coordinate system.
5. Dirac delta function and its properties.
6. Gaussian distribution: Mean and Variance.

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