



UNIVERSITY OF NORTH BENGAL

B.Sc. Honours Part-II Examination, 2021

PHYSICS

PAPER-V

Full Marks: 70

ASSIGNMENT

The figures in the margin indicate full marks.

Candidates are required to give their answers in their own words as far as practicable.

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 for each topic is 400

Write notes on *all* of the following topics

10×7 = 70

GROUP-A

(Thermodynamics)

1. Thermodynamic processes
2. Second law of thermodynamics: Statements and their equivalence
3. Maxwell's thermodynamic relations
4. Adiabatic demagnetization

GROUP-B

(Electricity-II)

5. Biot-Savart law: Application to find the magnetic field due to a current carrying solenoid of finite length at an internal point
6. Faraday's laws of electromagnetic induction: Integral and differential form
7. Resonance in a series LCR circuit

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