



UNIVERSITY OF NORTH BENGAL

B.Sc. Honours Part-II Examination, 2021

PHYSICS

PAPER-IV

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 (Geometrical Optics)

1. Fermat's Principle: refraction at a curved boundary.
2. Location of cardinal points for Ramsden's eye-piece and Huygen's eye-piece.

GROUP-B (Physical Optics)

3. Young's double slit experiment and expression for fringe width.
4. Plane transmission grating.
5. Fabry Perot interferometer: construction and working principle.

GROUP-C (Electronics-I)

6. Thevenin's and maximum power transfer theorems.
7. Zener diode as a voltage regulator.

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