

PART 1 - PHYSICS

Topic : Wave optics

SECTION-B : (Maximum Marks : 4)

This section contains **ONE** question.

The answer to each question is a **NUMERICAL VALUE**.

For each question, enter the correct numerical value of the answer (in decimal notation, truncated / rounded-off to the **SECOND DECIMAL PLACE**; e.g. 6.25, 7.00, -0.33, -.30, 30.27, -127.30) in the place designated to enter the answer.

Answer to each question will be evaluated according to the following marking scheme :

Full Marks : +4 If **ONLY** the correct answer is entered;

Zero Marks : 0 In all other cases.

1. In a single slit diffraction experiment, a slit of width (0.016 ± 0.002) mm is used to measure the wavelength of a monochromatic light source. In the diffraction pattern, the angular distance between the central maximum and first minimum is measured to be $(2^\circ \pm 40')$. The value of the fractional error in the measurement of wavelength is:

[Given: $\sin(2^\circ) = 0.035$]

[JEE Advanced 2026 Paper 2]

Scan or tap for the
full solution



Space for Rough Work

JEE ADVANCED WAVE OPTICS — DIFFRACTION AT A SINGLE SLIT — PYQS

Test Pattern : JEE (Advanced)

ANSWER KEY

SECTION-B

Ques.	1									
Ans.	0.43 to 0.50									