

PART 1 - PHYSICS

Topic : Wave optics

SECTION-A : (Maximum Marks : 4)

- This section contains **ONE** question.
- Each question has **TWO** lists: **List-I** and **List-II**.
- Four options are given representing matching of elements from List-I and List-II. **ONLY ONE** of these four options corresponds to a correct matching.
- For each question, choose the option corresponding to the correct answer.
- Answer to each question will be evaluated according to the following marking scheme :
 Full Marks : +4 If **ONLY** the correct option is chosen;
 Zero Marks : 0 If none of the options is chosen (i.e. the question is unanswered);
 Negative Marks : -1 In all other cases.

1. In the **List-I**, four optical effects are mentioned. The physical phenomena of light which are essential to describe these optical effects are given in **List-II**. Choose the option which describes the correct match between the entries in **List-I** to those in **List-II**. [JEE Advanced 2026 Paper 1]

List-I		List-II	
P.	Colorful sky in north polar region (Aurora Borealis)	1.	Dispersion and reflection
Q.	Partially polarized sun light	2.	Total internal reflection
R.	Rainbow	3.	Diffraction
S.	Dark and bright fringes	4.	Scattering of light by molecules in the atmosphere
		5.	Emission of radiation from oxygen and nitrogen atoms excited by charged particles

(A) $P \rightarrow 5, Q \rightarrow 4, R \rightarrow 1, S \rightarrow 3$ (B) $P \rightarrow 4, Q \rightarrow 2, R \rightarrow 1, S \rightarrow 3$ (C) $P \rightarrow 4, Q \rightarrow 1, R \rightarrow 2, S \rightarrow 3$ (D) $P \rightarrow 5, Q \rightarrow 4, R \rightarrow 1, S \rightarrow 2$

Scan or tap for the full solution



Space for Rough Work

SECTION-B : (Maximum Marks : 4)

- This section contains **ONE** question.
- The answer to each question is a **NON-NEGATIVE INTEGER**.
- For each question, enter the correct integer corresponding to the answer 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.

2. A point source S emits unpolarized light uniformly in all directions. At two points A and B, the ratio $r = I_A/I_B$ of the intensities of light is 2. If a set of two polaroids having 45° angle between their pass-axes is placed just before point B, then the new value of r will be ____.

[JEE Advanced 2024 Paper 1]

Scan or tap for the
full solution



Space for Rough Work

JEE ADVANCED WAVE OPTICS — POLARISATION,
POLAROIDS AND MALUS'S LAW — PYQS

Test Pattern : JEE (Advanced)

ANSWER KEY

SECTION-A																									
Ques.	1																								
Ans.	A																								

SECTION-B																									
Ques.	2																								
Ans.	8																								