

PART 1 - PHYSICS

Topic : System of particles and rotational motion

SECTION-1 : (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;

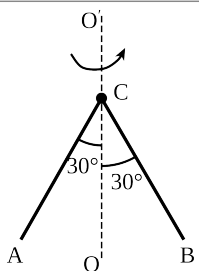
Zero Marks : 0 If none of the options is chosen (i.e. the question is unanswered);

Negative Marks : -1 In all other cases.

1. **List-I** shows four planar structures made of uniform solid rods each of mass m and length l . In the **List-II** the possible moment of inertia of these structures about an axis OCO' , which lies in the plane of the structures, are given.

	List-I		List-II
P.		1.	$\frac{5}{4}ml^2$
Q.		2.	$\frac{1}{6}ml^2$
R.		3.	$\frac{1}{12}ml^2$

Space for Rough Work

List-I		List-II	
S.		4.	$\frac{2}{3}ml^2$
		5.	$\frac{1}{3}ml^2$

Choose the option that describes the correct match between the entries in List-I to those in List-II.

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(A) $P \rightarrow 5, Q \rightarrow 1, R \rightarrow 4, S \rightarrow 2$

(B) $P \rightarrow 1, Q \rightarrow 3, R \rightarrow 4, S \rightarrow 2$

(C) $P \rightarrow 5, Q \rightarrow 3, R \rightarrow 2, S \rightarrow 1$

(D) $P \rightarrow 5, Q \rightarrow 4, R \rightarrow 2, S \rightarrow 1$

Scan or tap for the full solution



Space for Rough Work

JEE ADVANCED SYSTEM OF PARTICLES AND ROTATIONAL
MOTION — MOMENT OF INERTIA AND RADIUS OF
GYRATION — PYQS

Test Pattern : JEE (Advanced)

ANSWER KEY

SECTION-1																											
Ques.	1																										
Ans.	A																										