

PART 1 - PHYSICS

Topic : System of particles and rotational motion

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.

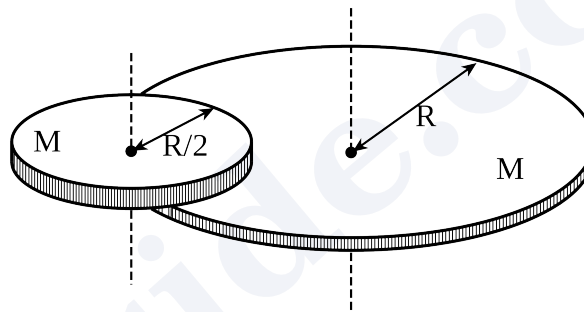
Answer to each question will be evaluated according to the following marking scheme :

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

Zero Marks : 0 In all other cases.

1. A disc of mass M and radius R is free to rotate about its vertical axis as shown in the figure. A battery operated motor of negligible mass is fixed to this disc at a point on its circumference. Another disc of the same mass M and radius $R/2$ is fixed to the motor's thin shaft. Initially, both the discs are at rest. The motor is switched on so that the smaller disc rotates at a uniform angular speed ω . If the angular speed at which the large disc rotates is ω/n , then the value of n is ____.

[JEE Advanced 2024 Paper 1]



Scan or tap for the full solution



Space for Rough Work

JEE ADVANCED SYSTEM OF PARTICLES AND ROTATIONAL MOTION — CONSERVATION OF ANGULAR MOMENTUM — PYQS

Test Pattern : **JEE (Advanced)**

ANSWER KEY

SECTION-B

[illegible]