

PART 1 - PHYSICS

Topic : System of particles and rotational motion

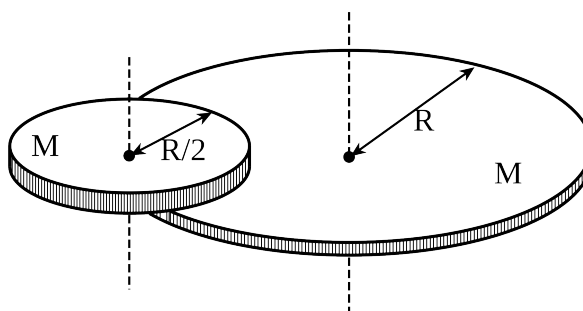
SECTION-1 : (Maximum Marks : 4)

- 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-1																											
Ques.	1																										
Ans.	12																										