

PYQSide

JEE MAIN MECHANICAL PROPERTIES OF SOLIDS — APPLICATIONS OF ELASTIC BEHAVIOUR OF MATERIALS — PYQS

Max. Marks: 8

Questions: 2

Section A (MCQ)

- Q.1** A lift of mass 1600 kg is supported by thick iron wire. If the maximum stress which the wire can withstand is $4 \times 10^8 \text{ N/m}^2$ and its radius is 4 mm, then maximum acceleration the lift can take is _____ m/s^2 .

(take $g = 10 \text{ m/s}^2$ and $\pi = 3.14$)

[JEE Main 2026 (Online) 6th April Morning Shift]

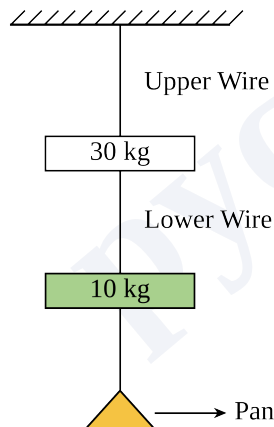
- (1) 2.56 (2) 3.89 (3) 4.32 (4) 5.16

Scan or tap for the full solution



- Q.2** Two wires as shown in the figure below, made of steel and have breaking stress of $12 \times 10^8 \text{ N/m}^2$. Area of cross-section of upper wire is 0.008 cm^2 and of lower wire is 0.004 cm^2 . The maximum mass that can be added to pan without breaking any wire is _____ kg.

[JEE Main 2026 (Online) 5th April Morning Shift]



- (1) 56 (2) 38 (3) 96 (4) 5.6

Scan or tap for the full solution



ANSWER KEY

Ques.	1	2									
Ans.	1	2									