PAPER SOLUTION

From Meerut

JEE MAIN 2026

JAN	SHIFT
21	1st

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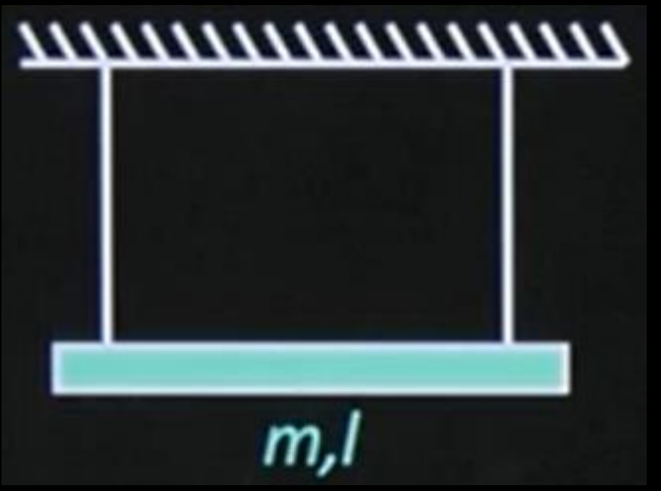
JEE MAIN 2026 LIVE PAPER DISCUSSION

#Q. A rod of mass m and length l is attached to two ideal strings. Find tension in left string just after right string is cut.



A $\frac{mg}{2}$

B $\frac{mg}{4}$

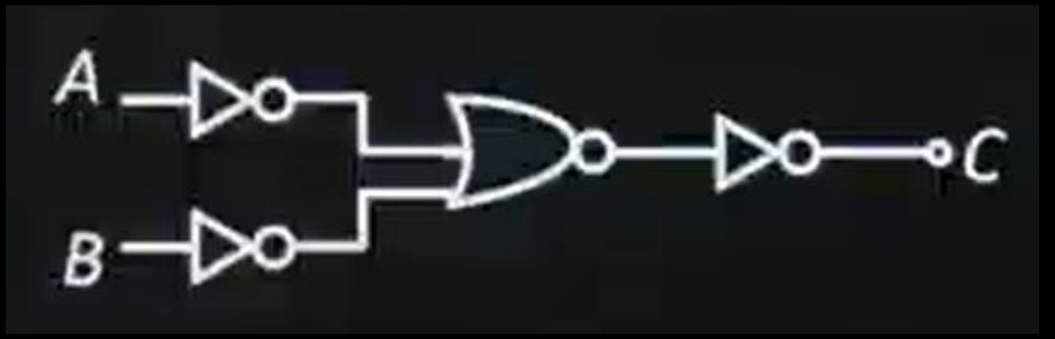
C $\frac{2}{3}$mg

D $\frac{mg}{5}$

(Ans – B)

JEE MAIN 2026 LIVE PAPER DISCUSSION

#Q. Which logic gate is given in the figure?



(A) XOR

(B) NOR

(C) NAND

(D) OR

(Ans – C)

JEE MAIN 2026 PAPER DISCUSSION

#Q. Find dimensions of $\frac{A}{B}$ if $\left(P + \frac{At^2}{B}\right) + \frac{1}{2}pV^2 =$ constant, where P→ pressure, $p \rightarrow$ density, $V \rightarrow$ speed. ?

A ML^1T^{-4}

B $ML^{-1}T^{-4}$

C ML^2T^{-4}

D $ML^{-1}T^{-2}$

(Ans – B)

JEE MAIN 2026 LIVE PAPER DISCUSSION

#Q. An air-filled capacitor of capacitance C filled with dielectric $(k = 3)$ of width d/3, where d is separation between plates. The new capacitance is ?

A $\frac{9}{5}C$

B $\frac{5}{4}C$

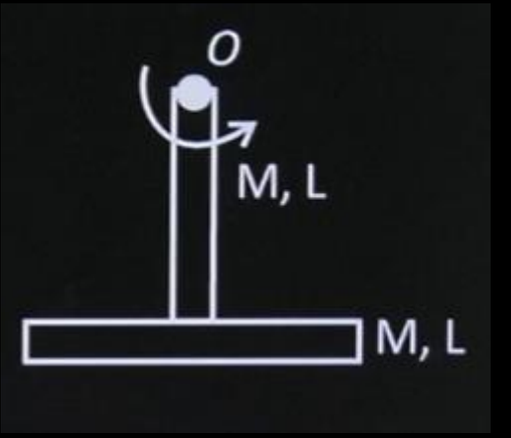
C $\frac{4}{3}C$

D $\frac{9}{7}C$

(Ans – D)

JEE MAIN 2026 LIVE PAPER DISCUSSION

#Q. Find the moment of inertia of system formed using two identical rods about the given axis of rotation as shown.



(A) $\frac{17}{12} ML^2$

(B) $\frac{13}{12} ML^2$

(C) $\frac{2}{3} ML^2$

(D) $\frac{3}{4} ML^2$

(Ans – A)

JEE MAIN 2026 LIVE PAPER DISCUSSION

#Q. An α-particle having kinetic energy 7.7 MeV is approaching fixe god nucleus (atomic number is 79). Find distance of closest approach.

A 1.72 nm

B 6.2 nm

C 16.8 nm

D 0.2 nm

(Ans – D)

JEE MAIN 2026 LIVE PAPER DISCUSSION

#Q. If electric field of EM wave is given by $60\left[\sin(3\times10^{14}t)+\sin(12\times10^{14}t)\right]$ at $x=0$ falls on a photo sensitive material having work function 2.8 eV . Find the maximum kinetic energy (M eV) of ejected electrons.

A 2.52 eV

B 2.16 eV

C 2.00 eV

D 2.34 eV

(Ans – B)

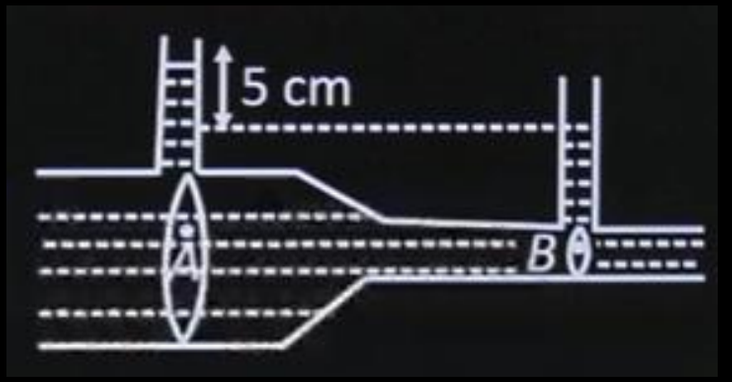
#Q. Spring constant $k_1 = 2 \pm 0.1\ N/m$, $k_2 = 4 \pm 0.1\ N/m$ are parallel so find % error.

(Ans – 33.33)

JEE MAIN 2026 LIVE PAPER DISCUSSION

#Q. Find volume flow rate in the venturi meter given below in which water is flowing.

[Cross-section area at A & B is A & $a, \frac{A}{a} = 2$. $A = \sqrt{3}\, m^2$. density $= 1000 kg/m^3$]



(A) 1

(B) $\sqrt{3}$

(C) $2\sqrt{3}$

(D) $\sqrt{2}$

(Ans – A)

JEE MAIN 2026 LIVE PAPER DISCUSSION

#Q. Wave propagates whose electric field is given by $\vec{E} = 69\ sin\ (wt - kx)\hat{j}$, find the direction of magnetic field

A $\hat{k}$

B $-\hat{k}$

C $\frac{\hat{i}+\hat{j}}{\sqrt{2}}$

D $\frac{\hat{i}-\hat{j}}{\sqrt{2}}$

(Ans – A)

JEE MAIN 2026 LIVE PAPER DISCUSSION

#Q. Two rods of equal length of 60 cm each are joined together end to end. Coefficient of linear expansions of the rods are $24 \times 10^{-6} C^{-1}$ *and* $1.2 \times 10^{-5} C^{-1}$. Their temperatures are same and equal to $30^0 C$ which is increased to $100^0 C$. Find final length of the combination (in cm).

A 120.1321

B 120.1123

C 120.1512

D 120.1084

(Ans – C)

JEE MAIN 2026 LIVE PAPER DISCUSSION

#Q. Find change in internal energy of gas if its temperature changes by 10K. Number of moles of gas is 10, C_P (specific heat at constant pressure of the gas is 7 cal/K/mol $R = 2$

A 500 cal

B 1000 cal

C 250 cal

D 100 cal

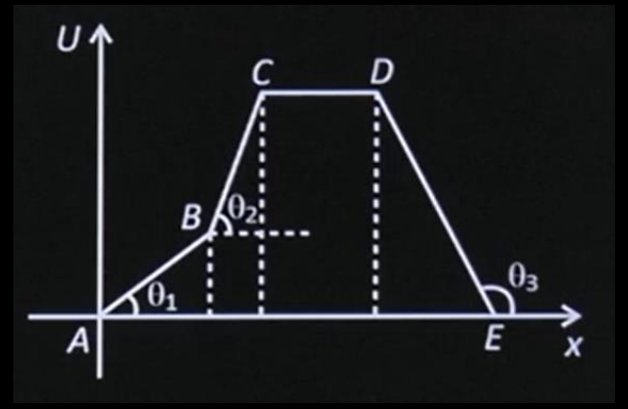
(Ans – A)

JEE MAIN 2026 LIVE PAPER DISCUSSION

#Q. A curve is given between potential energy of a particle and its position on x-axis.

Given: $\tan\theta_1 = 1, \tan\theta_2 = 3, \tan\theta_2 = \frac{-1}{2}$

If F_{AB} be force acting on the particle during A to B similarly F_{BC}, F_{CD} and F_{DE} are the forces during B to C, C to D and D to E respectively. Arrange magnitudes of these forces in decreasing



A $F_{BC} > F_{AB} > F_{CD} > F_{DE}$

B $F_{BC} > F_{AB} > F_{DE} > F_{CD}$

C $F_{AB} > F_{BC} > F_{DE} > F_{CD}$

D $F_{BC} > F_{DE} > F_{AB} > F_{CD}$

(Ans – B)

JEE MAIN 2026 LIVE PAPER DISCUSSION

#Q. A satellite is revolving around a planet in orbit radius of 1.5 R. Additional minimum energy required to transfer the satellite to new orbit radius of $3R$ is (m and M are mass of satellite & planet) $\frac{GMm}{\lambda R}$ then X is ___ .

(Ans – 6)

JEE MAIN 2026 LIVE PAPER DISCUSSION

#Q. There are two springs of springs constants $k_1 = (20 \pm 0.2)\ N/m$ and $k_2 = (30 \pm 0.3)\ N/m$. If they are connected in parallel then percentage error in equivalent spring constant. Of combination is _____%

(Ans – 1)