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JEE (MAIN) 2026

MEMORY BASED QUESTIONS & TEXT SOLUTION

SHIFT-2

DATE & DAY: 24th January 2026 & Saturday

PAPER-1

Duration: 3 Hrs.

Time: 03:00 PM – 06:00 PM

SUBJECT: PHYSICS

Selections in JEE (Advanced)/
IIT-JEE Since 2002

52979

Classroom: 35901 | Distance: 17078

Selections in JEE (Main)/
AIEEE Since 2009

262693

Classroom: 194471 | Distance: 68222

Selections in NEET (UG)/
AIPMT/AIIMS Since 2012

22733

Classroom: 15409 | Distance: 7324

Admission Open for 2026-27

Target: JEE (Advanced) | JEE (Main) | NEET (UG) | PCCP (Class V to X)

100% Scholarship on the basis of Class 10th, 12th
& JEE (Main) 2026 %ile / AIR

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PART : PHYSICS

1. A uniform rope is supported by two level pin support as shown in the figure. Mass of the rope is m . Find the tension at mid-point.



(1) $\frac{mg}{4}$

(2) mg

(3) $\frac{mg\sqrt{3}}{2}$

(4) $\frac{mg}{2}$

Ans. (3)

2. Find force on charge $q = 1 \mu\text{C}$ as due to uniformly charged rod having charge to $2\mu\text{C}$ as shown in the figure.



(1) 12 N

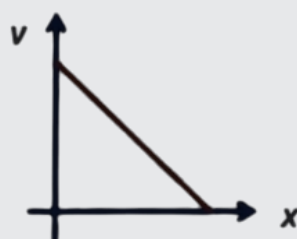
(2) 7.5 N

(3) 18 N

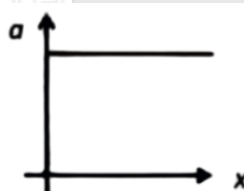
(4) 6 N

Ans. (2)

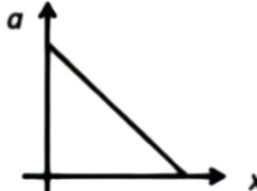
3. Velocity of particle varies with position as shown in the below graph. Find the correct variation of acceleration with position.



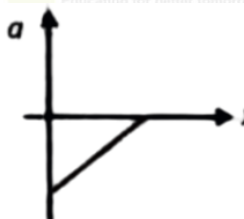
(1)



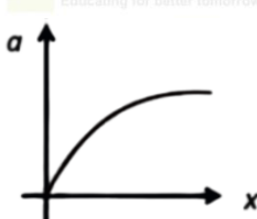
(2)



(3)



(4)



Ans. (3)

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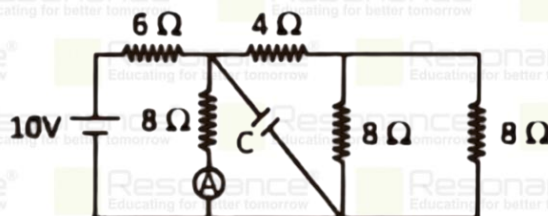
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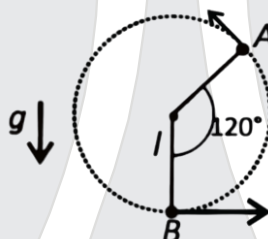
4. Find current through ammeter (in A), in steady state



- (1) 0.5 (2) 1 (3) 0.75 (4) 2

Ans. (1)

5. A particle attached to an ideal string is projected from position B (lowest position). At position A, tension in string becomes zero. Find speed in string at B.



- (1) $\sqrt{2gl}$ (2) $\sqrt{\frac{3gl}{2}}$ (3) $\sqrt{5gl}$ (4) $\sqrt{\frac{7gl}{2}}$

Ans. (4)

6. The distance between object and a three times magnified real image in a concave mirror is 40 cm, Then the focal length of the mirror is.

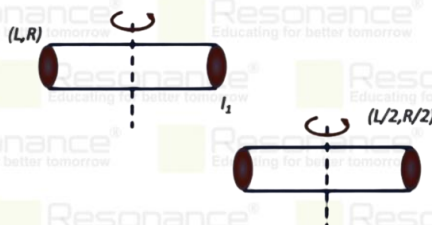
Ans. (-15 cm)

7. Radius of a soap bubble is charged from 7 cm to 14 cm then the work done in this process is (in μJ) is $(15000 - x)$ find the value of x . ($\pi = \frac{22}{7}$) ($T = 0.04 \text{ N/m}$)

- (1) 256 (2) 225 (3) 196 (4) 216

Ans. (4)

8. For a uniform cylinder of length L and radius R the moment of inertia is I_1 . Now for similar situation but length $\frac{L}{2}$ and radius $\frac{R}{2}$ moment of inertia is I_2 . Find I_1/I_2 .



- (1) 1/4 (2) 32 (3) 8 (4) 16

Ans. (2)

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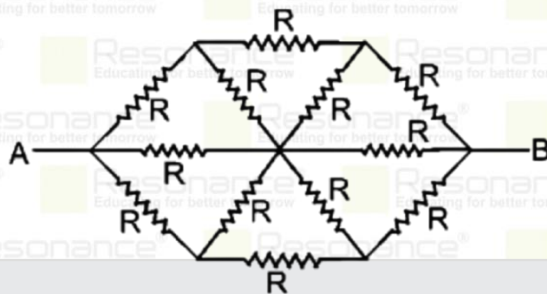
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9. Find the equivalent resistance between A & B of the resistor's network. Each value of the resistor is R .



(1) $\frac{4}{3}R$

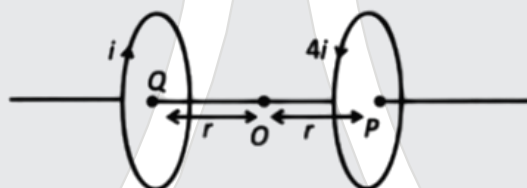
(2) $\frac{14}{19}R$

(3) $\frac{4}{5}R$

(4) $\frac{3}{4}R$

Ans. (3)

10. Two identical loops are placed coaxially as shown. Radius of both loops is r . Find magnetic field at O .



(1) $\frac{3\mu_0 i}{4\sqrt{2}r}$ towards Q

(2) $\frac{\mu_0 i}{4\sqrt{2}r}$ towards P

(3) $\frac{3\mu_0 i}{4\sqrt{2}r}$ towards P

(4) $\frac{\mu_0 i}{4\sqrt{2}r}$ towards Q

Ans. (3)

11. Distance between an object and its image formed by a lens is 30 cm with magnification $m = 3$. Find the focal length of lens (in cm)

(1) 22.5 cm

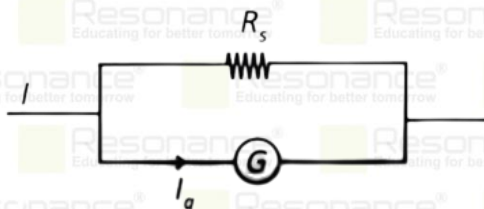
(2) 4 cm

(3) 11.25 cm

(4) 15 cm

Ans. (1)

12. A galvanometer of 100Ω can give full scale deflection for $I_g = 1$ mA. Find the value of shunt resistance R_s to get the 4 mA range ammeter.



(1) $\frac{21}{2}\Omega$

(2) 10Ω

(3) $\frac{100}{3}\Omega$

(4) $\frac{25}{2}\Omega$

Ans. (3)

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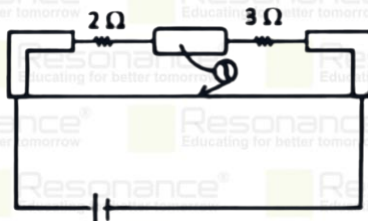
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13. In meter bridge given below, when $X\Omega$ of resistor is connected in parallel to 3Ω , null point shifts by 10 cm. Find x



- (1) 4Ω (2) 2Ω (3) 6Ω (4) 8Ω

Ans. (3)

14. A cubical block of density 600 kg/m^3 is floating in a liquid of density 900 kg/m^3 . The height of cube immersed in liquid is (Cube side = 10 cm)

- (1) 6.67 cm (2) 10 cm (3) 5 cm (4) 7.2 cm

Ans. (1)

15. In a Vernier caliper 50 vernier scale dimension coincides with 48 main scale dimensions. If one main scale dimension is 1 mm then the least count of the measurement is

- (1) 0.004 cm (2) 0.04 cm (3) 0.02 cm (4) 0.002 cm

Ans. (1)

16. Stopping potential for a photoelectric experiment is $v_0 = 3.2 \text{ V}$ for wavelength λ . If wavelength is doubled, the stopping potential becomes $v'_0 = 0.7 \text{ V}$. Find the wavelength λ .

- (1) 80 nm (2) 410 nm (3) 248 nm (4) 516 nm

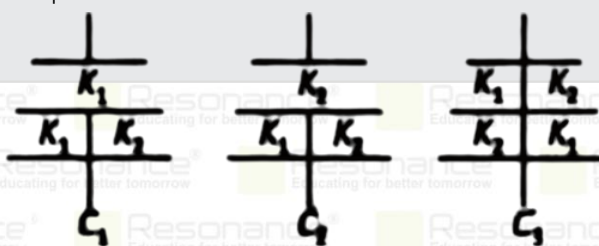
Ans. (3)

17. The object and image distances from lens are recorded by student as $(u, v) - P_1(30,60), P_2(30,12), P_3(20,60) \& P_4(-25,100)$. (Values are magnitudes of distances with sign). If power of lens is 5D. Which Readings is/are correct?

- (1) P_1, P_2 (2) P_1, P_4 (3) P_2, P_3 (4) P_1, P_3

Ans. (2)

18. If $K_1 > K_2$ which order of C_{eq} for the 3 given configuration is correct.



- (1) $C_1 > C_2 > C_3$ (2) $C_3 > C_2 > C_1$ (3) $C_2 > C_3 > C_1$ (4) $C_1 > C_3 > C_2$

Ans. (4)

19. An ideal gas of molar mass 50 g is given 300 J heat at constant volume. Its temperature changes from 20°C to 50°C . If $C_v = \frac{7}{2}R$ and $R = 8.3$ in SI unit, then mass of gas is (in g) (approx.)

Ans. (17)

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