

Marking Scheme for WBJEE 2026

Understanding the marking scheme is essential for efficient answering and attempting questions with a strategic mindset. Check marking scheme in the table provided below:

WBJEE Marking Scheme 2026		
Category	Marks Distribution	Negative Marking
Category I	1 mark	1/4 mark
Category II	2 mark	1/2 mark
Category III	2 mark	No Negative Marking

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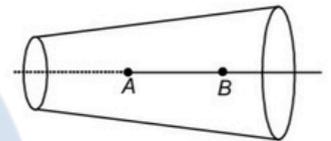
Category -1

1. A particle moving in a straight line is acted by a force, which works at a constant power and changes its velocity from u to v in passing over a distance x . The time taken will be:

- (A) $x \left(\frac{v-u}{v^2+u^2} \right)$
 (B) $x \left(\frac{v+u}{v^2+u^2} \right)$
 (C) $\frac{3}{2} x \left(\frac{v^2-u^2}{v^3-u^3} \right)$
 (D) $x \left(\frac{v}{u} \right)$

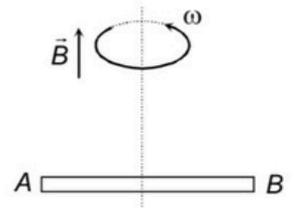
2. A resistance of frustum shape is shown in figure. If a current i passes through the resistance, the electric field at A and B are related as

- (A) $E_A > E_B$
 (B) $E_B > E_A$
 (C) $E_A = E_B$
 (D) There is no relation

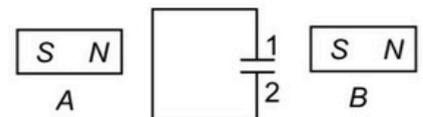


3. A conducting rod of length $2l$ is rotating with constant angular speed ω about its perpendicular bisector. A uniform magnetic field \vec{B} exists parallel to the axis of rotation. The emf induced between two ends of the rod is

- (A) $B\omega l^2$
 (B) $\frac{1}{2} B\omega l^2$
 (C) $\frac{1}{8} B\omega l^2$
 (D) Zero

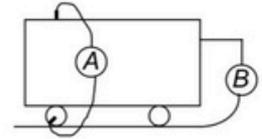


4. Two bar magnet moving with same speed in the given figure. Choose correct statement.

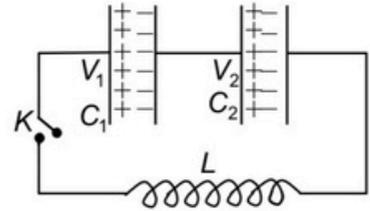


- (A) Plate (1) will be +ve relative to (2) if A moving B moving towards left.
 (B) Plate (1) will be +ve relative to (2) if A moving towards left and B moving towards right.
 (C) Charge on capacitor increase if A and B are at rest.
 (D) None of these

5. A flat, rail road car with a wooden base moves left with some velocity. A millivoltmeter A is connected across the axle of the car and is in the car. Another voltmeter B is connected across the rails of the car. Then
- Reading of A and $B =$ zero
 - Reading of $A =$ zero and B is non zero.
 - Reading of $B =$ zero and A is non zero.
 - Reading of A and B are non zero.

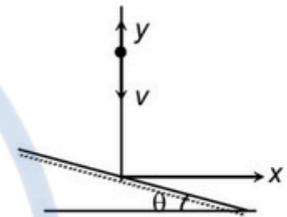


6. Two capacitors of capacitance C_1 and C_2 are charged to a potential difference of V_1 and V_2 respectively and are connected to an inductor of inductance L as shown in the figure. Initially key k is open. Now key k is closed and current in the circuit starts increasing. When current in the circuit is maximum



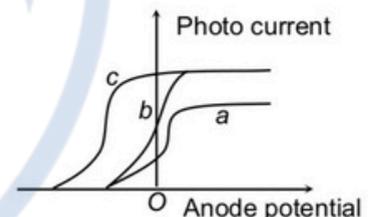
- charge on both the capacitors is same
- induced emf in the inductor is zero
- potential difference across both the capacitors is half of the induced emf
- electrostatic potential energy stored in both the capacitors is same

7. An object is moving towards a mirror with a velocity v as shown in figure. If the collision between the mirror and the object is perfectly elastic, then the velocity of the image after collision with mirror in vector form is



- $-v\hat{j}$
- $-v \cos 2\theta \hat{j} + v \sin 2\theta \hat{i}$
- $-v\hat{i}$
- $-v \cos 2\theta \hat{j} - v \sin 2\theta \hat{i}$

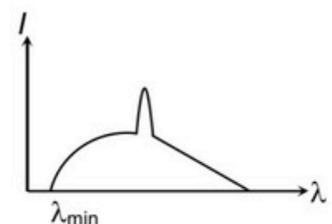
8. The figure shows the variation of photo current with anode potential for a photo-sensitive surface for three different radiations. Let I_a , I_b and I_c be the intensities and f_a , f_b and f_c be the frequencies for the curves a , b and c respectively;



- $f_a = f_b$ and $I_a \neq I_b$
- $f_a = f_c$ and $I_a = I_c$
- $f_a = f_b$ and $I_a = I_b$
- $f_b = f_c$ and $I_b = I_c$

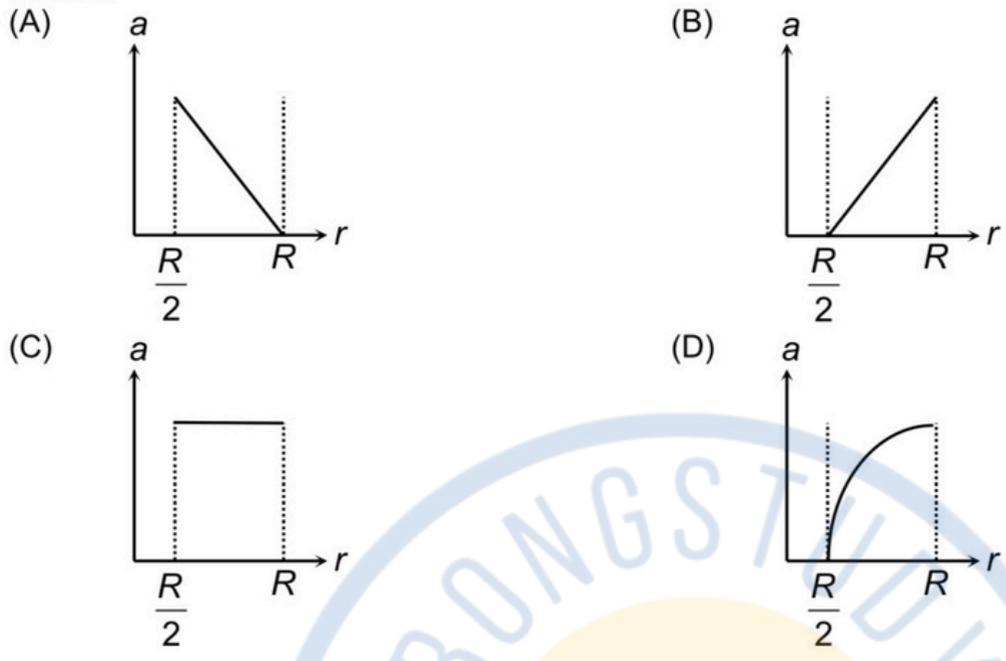
9. An X-ray tube has three main controls.
- the target material (its atomic number Z)
 - the filament current (I_f) and
 - the accelerating voltage (V)

Figure shows a typical intensity distribution against wavelength. Which of the following is incorrect?

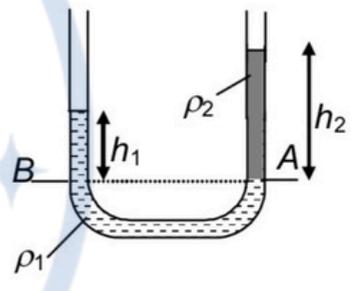


- The limit λ_{\min} is proportional to V^{-1}
- The sharp peak shifts to the right as Z is increased
- The penetrating power of X ray increases if V is increased
- The intensity everywhere increases if filament current I_f is increased

10. A frictionless tunnel is dug along a chord of the earth at a perpendicular distance $R/2$ from the centre of earth (where R is radius of earth). An object is released from one end of the tunnel. The correct graph, showing the variation of acceleration of particle with its distance r from centre of earth is

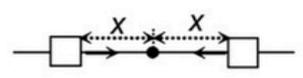


11. Two immiscible liquids are poured in a U-tube having densities ρ_1 and ρ_2 . The ratio of height of the liquids above their interface (h_1/h_2) is



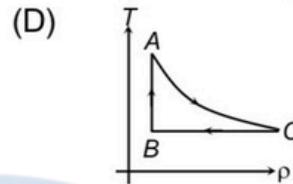
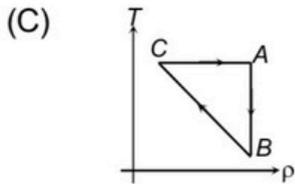
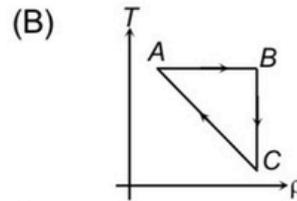
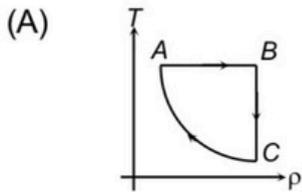
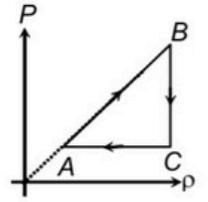
- (A) directly proportional to their densities
- (B) inversely proportional to their densities
- (C) directly proportional to square of their densities
- (D) equal

12. Two particles are performing simple harmonic motion with same amplitude and same frequency. When they are at same distance from mean position on opposite sides, their speeds are one fourth of maximum speed. Also at these positions their direction of velocities are opposite, the phase difference between the two simple harmonic motions is



- (A) $\frac{\pi}{2}$
- (B) π
- (C) $\frac{3\pi}{2}$
- (D) $\frac{5\pi}{4}$

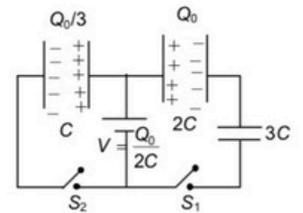
13. Pressure versus density of an ideal gas is shown in the graph. Then the correct temperature versus density of gas graph is



14. P-V diagram of a diatomic gas is straight line parallel to P-axis. The molar heat capacity of the gas in the process will be

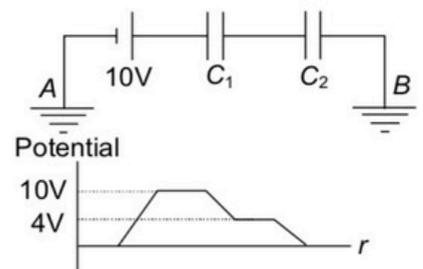
- (A) $4R$
 (B) $2.5R$
 (C) $3R$
 (D) $4R/3$

15. In the given circuit, the initial charges on the capacitors are shown in the figure. The charge flown through the switches S_1 and S_2 respectively after closing the switches are



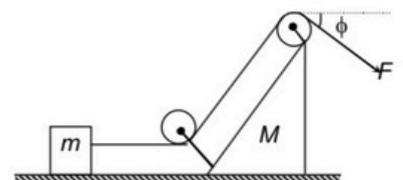
- (A) zero, $\frac{Q_0}{6}$
 (B) $\frac{Q_0}{5}$, $\frac{Q_0}{2}$
 (C) zero, $\frac{Q_0}{2}$
 (D) $\frac{3}{5}Q_0$, $\frac{Q_0}{6}$

16. Figures shows two capacitors C_1 and C_2 connected with 10 V battery and terminal A and B are earthed. The graph shows the variation of potential as one moves from left to right. Then the ratio of C_1/C_2 is



- (A) $5/2$
 (B) $2/3$
 (C) $2/5$
 (D) $4/3$

17. In the given arrangement pulleys and string are massless and frictionless and all surfaces are smooth. Find the magnitude of acceleration of wedge of mass M .

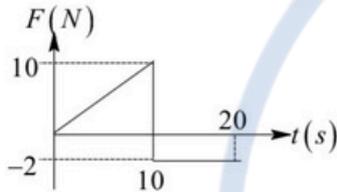


- (A) $\frac{F \cos \phi}{M}$

- (B) $\frac{F(1 - \cos \varphi)}{M}$
- (C) $\frac{F}{m + M}$
- (D) $\frac{F \cos \varphi}{m + M}$

18. Mark the incorrect statement among the following:
- (i) a particle can have zero velocity and non-zero acceleration
(ii) a particle can have zero displacement and non-zero velocity
(iii) a particle can have zero acceleration and non-zero velocity
(iv) a particle can have zero displacement and non-zero average velocity
- (A) (i)
(B) (ii)
(C) (iii)
(D) (iv)

19. The force time graph for the motion of a body is shown in the following figure. The change in momentum of the body between 0 and 20 s is:



- (A) 20 kg ms^{-1}
(B) 25 kg ms^{-1}
(C) 30 kg ms^{-1}
(D) 35 kg ms^{-1}
20. Under the action of a force $\vec{F} = xy^2\hat{i} + yx^2\hat{j}$, a particle is moving along a parabolic path given by $y = x^2$. The work done by this force in moving the particle from $(0, 0)$ to (a, a^2) is:
- (A) $\frac{a^6}{2}$
(B) $\frac{a^5}{2}(a^2 + 2)$
(C) $\frac{a^4}{2}$
(D) $a^2 + a^3$

21. A particle is moving along x-axis whose acceleration is given by $a = 3x - 4$, where x is the position of the particle. At $t = 0$, the particle is at rest at $x = \frac{4}{3} m$. The distance travelled by the particle in 5 s is (in m) _____

a.000000b. 0.000004c.1.2 d.1.4

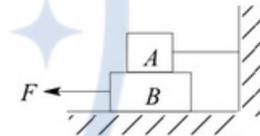
22. A birds flies for 4 s with a velocity of $|t - 2| \text{ ms}^{-1}$ in a straight line, where t is in second. The distance travelled by it is (in m) _____

a.0.00004 b. 0.000000c.0.1 d.0.3

23. A fire hose squirts 12 kg s^{-1} of water against a flat plate (normally). The velocity of stream is 10 ms^{-1} . If the water flows parallel to the plate after striking it, the average force on the plate is (in N)_____

a.00120.00b. 0.000000c.0.3d.0.5

24. Block A weighs 4 N and block B weighs 8 N. The coefficient of kinetic friction is 0.25 for all surfaces. The force F if B slides at constant speed with A at rest on B and moves with it, is (in N)_____.

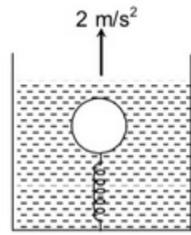


a.0.00003 b. 0.000000c.0.1 d.0.3

25. A uniform rope of length 12 m and mass 6 kg hangs vertically from a rigid support. A block of mass 2 kg is attached to the free end of the rope. A transverse pulse of wavelength 0.06 m is produced at the lower end of the rope. The wavelength of the pulse when it reaches the top of the rope is (in m) _____

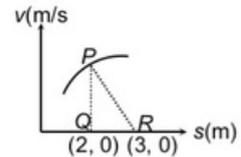
a.00000.12b. 0.000000c.0.1 d.0.3

26. A ball of mass 10 kg and density 1 gm/cm^3 is attached to the base of a container having a liquid of density 1.1 gm/cm^3 , with the help of a spring as shown in the figure. The container is going up with an acceleration 2 m/s^2 . If the spring constant of the spring is 200 N/m , the elongation in the spring is (in cm)



a.0.00004 b. 0.00006 c.0.1 d.0.3

27. Velocity versus displacement curve of a particle moving in straight line is shown in the figure. From a point P , a line is drawn perpendicular to displacement axis and line PR is drawn normal to the curve at P . The instantaneous acceleration of the particle at point P is (in m/sec^2)



a.0.00001 b. 0.000000 c.0.1 d.0.3

28. A brass scale is graduated at 10°C . What is the true length of a zinc rod (in S.I. unit) which measures 60.00 cm on this scale at 30°C . Coefficient of linear expansion of brass = $18 \times 10^{-6} \text{ K}^{-1}$.

a.0.00060 b. 0.000000 c.0.1 d.0.3

29. A very small sphere of mass 80 g having a charge q is held at a height 9 m vertically above the centre of a fixed non conducting sphere of radius 1 m , carrying an equal charge q . When released it falls until it is repelled just before it comes in contact with the sphere. Calculate the charge q . (in μC) $[g = 9.8 \text{ m/s}^2]$

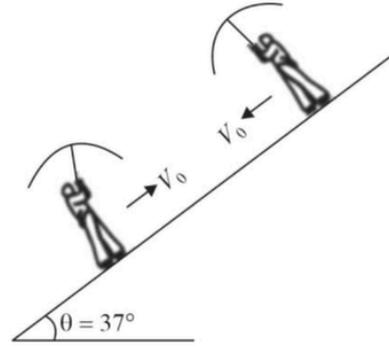
a.0.00004 b. 0.00028 c.0.1 d.0.3

30. In a two slit experiment with monochromatic light, fringes are obtained on a screen placed at some distance from the plane of slits. If the screen is moved by $5 \times 10^{-2} \text{ m}$ towards the slits, the change in fringe width is $3 \times 10^{-5} \text{ cm}$. If the distance between the slits is 10^{-3} m , calculate the wavelength of the light used (in \AA) _____.

a.0.06000 b. 0.000000 c.0.1 d.0.3

Category-2

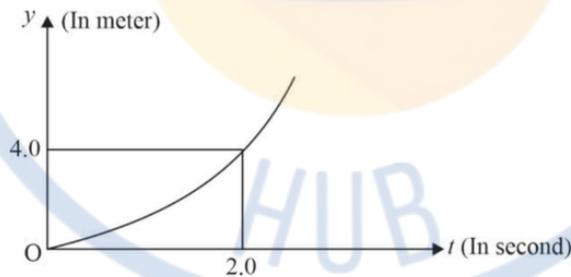
1. A man walking downhill with velocity V_0 finds that his umbrella gives him maximum protection from rain when he holds it such that the stick is perpendicular to the hill surface. When the man turns back and climbs the hill with velocity V_0 , he finds that it is most appropriate to hold the umbrella stick vertical. Find the actual speed of raindrops in terms of V_0 . The inclination of the hill is $\theta = 37^\circ$.



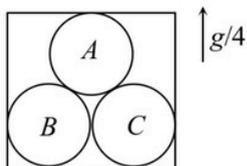
2. A hemispherical bowl of radius R is rotating about its own axis (which is vertical) with an angular velocity ω . If a particle on the inner surface of the bowl remains stationary with respect to the bowl at a height $\frac{R}{2}$ from the bottom of bowl, the value of ω is:

- (A) $\sqrt{\frac{g}{R}}$ (B) $\sqrt{\frac{2g}{R}}$ (C) $\sqrt{\frac{g}{2R}}$ (D) $\sqrt{\frac{2g}{\sqrt{3}R}}$

3. An elevator starts moving upward with constant acceleration. The position time graph for the floor of the elevator is as shown in the figure. The ceiling to floor distance of the elevator is 1.5 m . At $t = 2.0 \text{ s}$, a bolt breaks loose and drops from the ceiling. At what time (in sec) after the elevator starts moving upward does the bolt hit the floor? [Take $g = 10 \text{ m/s}^2$]



- (A) 3 (B) 3.5 (C) 4 (D) 2.5
4. Three identical smooth spheres, each of mass m , are kept in contact inside a box as shown in figure. If box is moving vertically upward with an acceleration $g/4$, then the normal force between spheres A and B is:



- (A) $2\sqrt{3}mg$ (B) $\frac{5mg}{4\sqrt{3}}$ (C) $\frac{mg}{\sqrt{3}}$ (D) mg

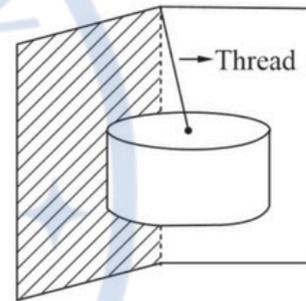
5. A $t = 0$, two particles B and C are located at the origin of the coordinate system. Then they start moving simultaneously. B moves under a constant acceleration of $2\hat{k} \text{ m/s}^2$ with an initial velocity of $8\hat{j} \text{ m/s}$. Particle C moves with constant velocity \vec{v}_0 in such a way that B and C collides at $t = 4$ sec. Then:
- (A) $\vec{v}_0 = (8\hat{j} + 4\hat{k}) \text{ m/s}$
 (B) $\vec{v}_0 = (4\hat{j} + 8\hat{k}) \text{ m/s}$
 (C) $\vec{v}_0 = (8\hat{j} + 8\hat{k}) \text{ m/s}$
 (D) It is not possible that B and C collide with each other for any value of \vec{v}_0

Category-3

6. The retardation of a particle moving on a straight line is proportional to its displacement (proportionality constant being unity). Initial velocity of the particle is v_0 . Find the total displacement of the particle till it comes to rest.

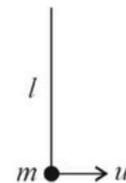
- (A) $\frac{v_0}{2}$ (B) v_0 (C) $\frac{v_0}{3}$ (D) $\frac{v_0^2}{4}$

7. A cylinder of mass M and radius r is suspended at the corner of a cubical room. Length of the thread is twice the radius of the cylinder. The walls are smooth. Which of the following options are correct?



- (A) The tension in the thread is $\sqrt{2}Mg$
 (B) The walls will apply no Normal Reaction on the cylinder
 (C) Normal reaction by each wall is $\frac{Mg}{\sqrt{2}}$
 (D) The tension in the thread is $\frac{2Mg}{\sqrt{3}}$

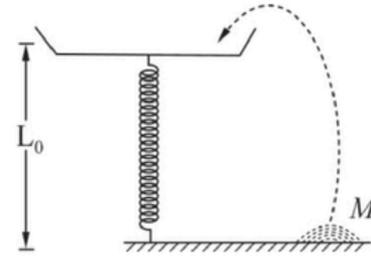
8. A light rigid rod of length l has a bob of mass m attached to one of its end. The other end is pivoted so that the entire assembly can rotate freely in a vertical plane. The bob is given a horizontal velocity u from the lowest position such that it is just able to complete the circle. Choose the correct options:



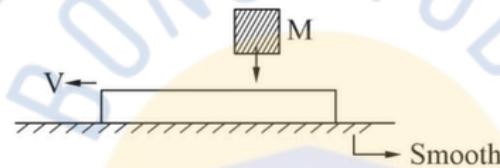
- (A) $u = \sqrt{4gl}$
 (B) Acceleration of the bob when rod becomes horizontal is $\sqrt{5}g$
 (C) Force exerted by rod on the bob is zero when bob reaches the topmost point
 (D) During the entire motion, the force exerted by rod on the bob is radially inwards towards the centre

9. A pan of negligible mass is supported by an ideal spring which is vertical. Length of the spring is L_0 . A mass M of sand is lying nearby on the floor. A boy lifts a small quantity of sand and gently puts it into the pan. This way he slowly transfers the entire sand into the pan. The spring compresses by $\frac{L_0}{2}$. Assume that height of the sand heap on the floor as well as in the pan is negligible. Choose the correct options.

- (A) The work done by the boy is $\frac{MgL_0}{2}$
- (B) The work done by the boy is $\frac{3MgL_0}{4}$
- (C) Final potential energy stored in spring is $\frac{MgL_0}{2}$
- (D) Final potential energy stored in spring is $\frac{MgL_0}{4}$



10. A plank is moving along a smooth surface with a constant speed V . A block of mass M is gently placed on it. Initially the block slips and then acquires the constant speed (V) same as the plank. Throughout the period, a horizontal force is applied on the plank to keep its speed constant. Which of the following statements are correct?



- (A) The work performed by the external force is MV^2
- (B) Power of external force is FV
- (C) The heat developed due to friction between the block and plank is $\frac{1}{2}MV^2$
- (D) The velocity of centre of mass of the system (plank + block) remains fixed