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# **TEST SERIES – JEE /NEET 2026 PATTERN**

PART TEST -01	•	TEST BOOKLET CODE: CS15 - PT- <u>01</u>
Student Name:		Roll No. :
Time: 1 Hour	Maximum Marks: 92	Date:
	Syllabus: Physics (Part Syllabus)	

#### **INSTRUCTIONS:**

- 1. Immediately fill in the particulars on this page of the Test Booklet with Blue/Black Ball Point Pen. Use of pencil is strictly prohibited.
- 2. The test is of 1 hour duration.
- 3. The Test Booklet consists of 23 questions. The maximum marks are 92.
- 4. There are three parts in the question paper consisting of Part-A Physics (Q.no. 1 to 23). Each part is divided into two sections, **Section-I** consists of 20 multiple choice questions & **Section-II** consists of 3 Numerical value answer Questions.

Part	Section-I MCQ Type	Section-II Numeric Answer Type	Total
A-Physics	20	3	23
Total	20	3	23

- 5. There will be only one correct choice in the given four choices in Section-I. For each question 4 marks will be awarded for correct choice, 1 mark will be deducted for incorrect choice and zero mark will be awarded for unattempted question for both Section-I and II.
- 6. Use Blue/Black Ball Point Pen only for writing particulars/marking responses on Side-1 and Side-2 of the Answer Sheet. Use of pencil is strictly prohibited.
- 7. No candidate is allowed to carry any textual material, printed or written, bits of papers, pager, mobile phone, any electronic device, etc. except the Admit Card inside the examination hall/room.
- 8. Rough work is to be done on the space provided for this purpose in the Test Booklet only.
- 9. On completion of the test, the candidate must hand over the Answer Sheet to the Invigilator on duty in the Room/Hall. However, the candidates are allowed to take away this Test Booklet with them.
- 10. Do not fold or make any stray marks on the Answer Sheet.

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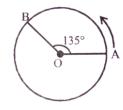
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## **PART TEST 2026**

#### **PART-A: PHYSICS**

# Section-I (Multiple Choice Questions)

- A person moved from A to B on a circular path as shown in figure. If the distance travelled by him is 60 m, then the magnitude of displacement would be: (Given cos 135°=-0.7)
  - (a) 42 m
- (b) 47 m
- (c) 19 m
- (d) 40m



The three charges q/2, q and q/2 are placed at the 2. corners A, B and C of a square of side 'a' as shown in figure. The magnitude of electric field (E) at the corner D of the square, is:



- (a)  $\frac{q}{4\pi \in a^2} \left( \frac{1}{\sqrt{2}} + \frac{1}{2} \right)$  (b)  $\frac{q}{4\pi \in a^2} \left( 1 + \frac{1}{\sqrt{2}} \right)$
- (c)  $\frac{q}{4\pi \in_0 a^2} \left( 1 \frac{1}{\sqrt{2}} \right)$  (d)  $\frac{q}{4\pi \in_0 a^2} \left( \frac{1}{\sqrt{2}} \frac{1}{2} \right)$
- A wire of resistance R<sub>1</sub> is drawn out so that its 3. length is increased by twice of its original length. The ratio of new resistance to original resistance is:
  - (a) 9:1

(b) 1:9

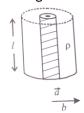
(c) 4:1

- (d) 3:1
- The dimensions of  $\left(\frac{B^2}{\mu_0}\right)$  will be: (if  $\mu_0$ : permeability

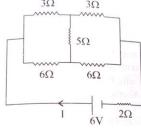
of free space and B: magnetic field)

- (a)  $[M L^2 T^{-2}]$
- (b)  $[M L T^{-2}]$
- (c)  $[M L^{-1} T^{-2}]$
- (d)  $[M L^2 T^{-2} A^{-1}]$

Model a torch battery of length  $\ell$  to be made up of a thin cylindrical bar of radius 'a' and a concentric thin cylindrical shell of radius 'b' filled in between with an electrolyte of resistivity  $\rho$  (see figure). If the battery is connected to a resistance of value R, the maximum Joule heating in R will take place for:



- (a)  $R = \frac{\rho}{2\pi\ell} \left(\frac{b}{a}\right)$
- (b)  $R = \frac{\rho}{2\pi\ell} \ell n \left(\frac{b}{a}\right)$
- (c)  $R = \frac{\rho}{\pi \ell} \ell n \left( \frac{b}{a} \right)$
- (d)  $R = \frac{2\rho}{\pi \ell} \ell n \left( \frac{b}{a} \right)$
- 6. A battery of 6 V is connected to the circuit as shown below. The current I drawn from the battery is:



(a) 1A

- (c)  $\frac{6}{11}$  A
- (d)  $\frac{4}{3}$  A
- In Vander Waals equation  $\left| P + \frac{a}{V^2} \right| \left[ V b \right] = RT; P$  is pressure, V is volume, R is universal gas constant and T is temperature. The ratio of constants is  $\frac{a}{b}$ dimensionally equal to

(c) PV

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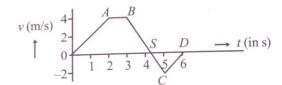
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8. Match List-I with List-II.

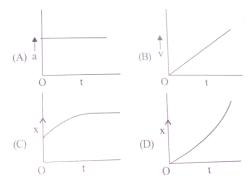
List –I		List-II	
(A)	Capacitance, C	(i)	$M^1L^1T^{-3}A^{-1}$
(B)	Permittivity of free space $\epsilon_0$	(ii)	$M^{-1}L^{-3}T^4A^2$
(C)	Permeability of free space, $\mu_0$	(iii)	$M^{-1}L^{-2}T^4A^2$
(D)	Electric field, E	(iv)	$M^{1}L^{1}T^{-2}A^{-2}$

Choose the correct answer from the options given below

- (a) (A)-(iii), (B)-(ii), (C)-(iv), (D)-(i)
- (b) (A)-(iii), (B)-(iv), (C)-(ii), (D)-(i)
- (c) (A)-(iv), (B)-(ii), (C)-(iii), (D)-(i)
- (d) (A)-(iv), (B)-(iii), (C)-(ii), (D)-(i)
- 9. The velocity (v) and time (t) graph of a body in a straight line motion is shown in the figure. The point S is at 4.333 seconds. The total distance covered by the body in 6 s is:
  - (a)  $\frac{37}{3}$ m
- (b) 12 m
- (c) 11 m
- (d)  $\frac{49}{4}$ m



 A particle starts from origin O from rest and moves with a uniform acceleration along the positive xaxis. Identify all figures that correctly represents the motion qualitatively (a=acceleration, v=velocity, x=displacement, t=time)



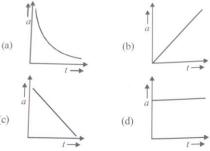
- (a) (B), (C)
- (b) (A)
- (c) (A), (B), (C)
- (d) (A), (B), (D)

- 11. A ball is thrown up vertically with a certain velocity so that, it reaches a maximum height h. Find the ratio of the times in which it is at height  $\frac{h}{3}$  while going up and coming down respectively.
  - (a)  $\frac{\sqrt{2}-1}{\sqrt{2}+1}$
- (b)  $\frac{\sqrt{3} + \sqrt{2}}{\sqrt{3} \sqrt{2}}$
- (c)  $\frac{\sqrt{3}-1}{\sqrt{3}+1}$
- (d)  $\frac{1}{3}$
- 12. A ball is projected from the ground with a speed 15 ms<sup>-1</sup> at an angle  $\,\theta$  with horizontal so that its range and maximum height are equal, then tan  $\,\theta$  will be equal to
  - (a)  $\frac{1}{4}$

(b)  $\frac{1}{2}$ 

(c) 2

- (d) 4
- 13. The distance travelled by a body moving along a line in time t is proportional to t<sup>3</sup>.
  The acceleration-time (a, t) graph for the motion of the body will be



- 14. A charge of  $4\mu C$  is to be divided into two. The distance between the two divided charges is constant. The magnitude of the divided charges so that the force between them is maximum, will be:
  - (a)  $1\mu C$  and  $3\mu C$
- (b) 2μC and 2μC
- (c) 0 and 4μC
- (d) 1.5μC and 2.5 μC
- 15. **A.** The drift velocity of electrons decreases with the increase in the temperature of conductor.
  - **B**. The drift velocity is inversely proportional to the area of cross-section of given conductor.
  - **C.** The drift velocity does not depend on the applied potential difference to the conductor.

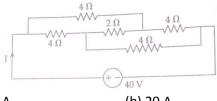
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- **D.** The drift velocity of electron is inversely proportional to the length of the conductor.
- **E.** The drift velocity increases with the increase in the temperature of conductor.

Choose the correct answer from the options given below:

- (a) A and B only
- (b) A and D only
- (c) B and E only
- (d) B and C only
- 16. The current I in the given circuit will be:



(a) 10 A

(b) 20 A

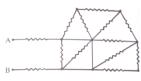
(c) 4 A

- (d) 40A
- 17. Match List I with List II.

List I		List II	
A.	Torque	1.	Nms <sup>-1</sup>
В.	Stress	II.	J kg <sup>-1</sup>
C.	Latent Heat	III.	Nm
D.	Power	IV.	Nm <sup>-2</sup>

Choose the correct answer from the options given below:

- (a) A-III, B-II, C-I, D-IV
- (b) A-III, B-IV, C-II, D-I
- (c) A-IV, B-I, C-III, D-II
- (d) A-II, B-III, C-I, D-IV
- 18. In the given circuit all resistances are of value R ohm each. The equivalent resistance between A and B is:



(a) 2R

(b)  $\frac{5R}{2}$ 

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

- (d) 3R
- 19. Given below are two statements: One is labeled as Assertion A and the other is labeled as Reason R. Assertion A: Alloys such as constantan & manganin are used in making standard resistance coils.

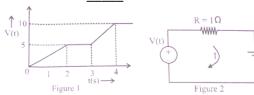
- **Reason R:** Constantan and manganin have very small value of temperature coefficient of resistance. In the light of the above statements, choose the correct answer from the options given below.
- (a) Both A and R are true and R is the correct explanation of A.
- (b) Both A and R are true but R is NOT the correct explanation of A.
- (c) A is true but R is false.
- (d) A is false but R is true.
- 20. A body of mass 10 kg is projected at an angle of 45° with the horizontal. The trajectory of the body is observed to pass through a point (20, 10). If T is the time of flight, then its momentum vector, at time

$$t = \frac{T}{\sqrt{2}}$$
, is \_\_\_\_\_ [Take g=10 m/s<sup>2</sup>]

- (a)  $100\hat{i} + (100\sqrt{2} 200)\hat{j}$  (b)  $100\sqrt{2}\hat{i} + (100 200\sqrt{2})\hat{j}$
- (c)  $100\hat{i} + (100 200\sqrt{2})\hat{j}$  (d)  $100\sqrt{2}\hat{i} + (100\sqrt{2} 200)\hat{j}$

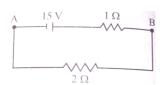
# **Section-II (Numerical Value Questions)**

- 21. If  $\vec{A} = (2\hat{i} + 3\hat{j} \hat{k})m$  and  $\vec{B} = (\hat{i} + 2\hat{j} + 2\hat{k})m$ . The magnitude of component of vector  $\vec{A}$  along vector  $\vec{B}$  will be \_\_\_\_\_m
- 22. For the circuit shown, the value of current at time t=3.2 s will be A.



[Voltage distribution V(t) is shown by fig (1) and the circuit is shown in fig (2)]

23. For the network shown below, the value  $V_B$ - $V_A$  is



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