

NEET 2026 Physics Code 12

Question Paper PDF

Conducted by National Testing Agency (NTA)



General Instructions

- (i) The test is of 1 hours duration.
- (ii) This test paper consists of 45 questions. The maximum marks are 180.
- (iii) Each question carries +4 marks for correct answer and –1 mark for wrong answer.

Physics

1. A 100-turn closely wound circular coil of radius 5 cm has a magnetic field of 3.14×10^{-3} T at its centre. The current flowing through the coil, and the magnitude of the magnetic moment of this coil are, respectively :

(Take $\mu_0 = 4\pi \times 10^{-7}$ T m/A)

- (1) 2.5 A, 2 A m²
- (2) 2.5 A, 20 A m²
- (3) 2 A, 4 A m²
- (4) 2 A, 10 A m²

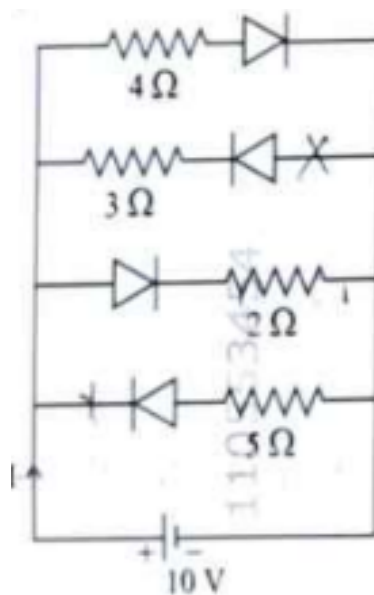
2. Match List I with List II :

List I	List II
A. $E = h\nu$	I. de Broglie wavelength
B. Diffraction and Interference	II. Particle nature of light
C. $\lambda = h/p$	III. Wave nature of light
D. Compton effect	IV. Energy of photon

Choose the correct answer from the options given below :

- (1) A-IV, B-III, C-I, D-II
 - (2) A-I, B-IV, C-II, D-III
 - (3) A-IV, B-I, C-II, D-III
 - (4) A-IV, B-III, C-II, D-I
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3. The current I in the circuit shown below is : (All diodes are ideal and identical)

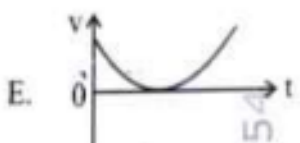
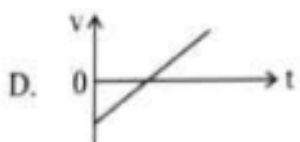
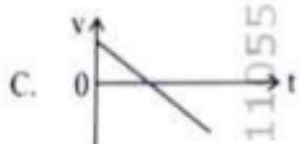
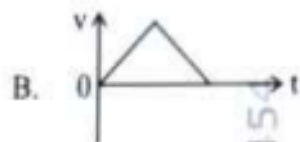
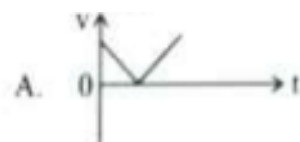


- (1) $\frac{5}{3}$ A
 - (2) 2 A
 - (3) $\frac{1}{3}$ A
 - (4) $\frac{2}{9}$ A
-

4. The speed of light in vacuum is taken as unity. If light takes 6 min 40 s to reach the Earth from the Sun, the distance between the Sun and the Earth in new unit is :

- (1) 3×10^8
- (2) 3×10^{10}
- (3) 400
- (4) 500

5. The following plots show variation of velocity (v) with time (t), of a ball thrown vertically upward, and falling back. Which of the following plots is/are correct ?



- (1) C only
- (2) A and E only
- (3) D only
- (4) B only

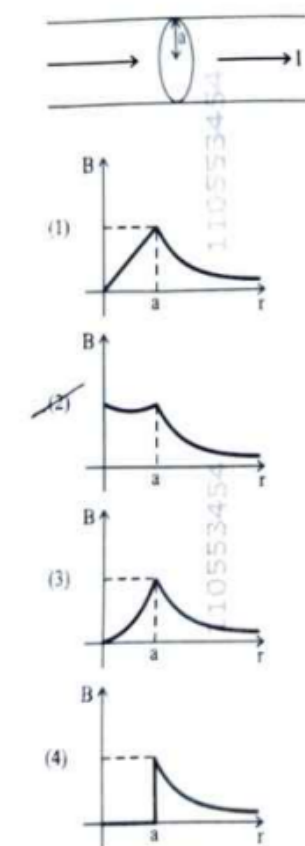
6. In a vernier callipers, 20 VSD coincide with 16 MSD (each division of length 1 mm). The least count of the vernier callipers is :

- (1) 0.01 cm
- (2) 0.1 cm
- (3) 0.02 cm
- (4) 0.2 cm

7. An ac circuit contains a resistance of $1\text{ k}\Omega$, a capacitor of $0.1\text{ }\mu\text{F}$ and an inductor of 1 mH connected in series. The resonance frequency of the circuit is approximately :

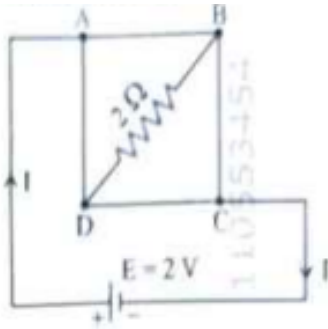
- (1) 10.1 kHz
- (2) 20.7 kHz
- (3) 15.9 kHz
- (4) 13.5 kHz

8. The figure given below shows a long straight solid wire of circular cross-section of radius 'a' carrying steady current I . The current I is uniformly distributed across its cross-section. The plot which correctly represents the variation of magnetic field (B) with distance (r) from the axis of the conductor in the region is :



- (1) (Graph shows linear increase inside and curved decrease outside)
- (2) (Graph shows a parabolic increase inside)
- (3) (Graph shows a linear increase then a constant field)
- (4) (Graph shows zero field inside)

9. A uniform metallic wire having resistance 4Ω is bent to form a square loop (ABCD). A resistance of 2Ω is connected between points B and D and a battery of 2 V is connected across points A and C as shown in the figure. Now the value of current (I) is :



- (1) 2 A
- (2) 4 A
- (3) 8 A
- (4) 4.5 A

10. An unknown nucleus has a nuclear density of $2.29 \times 10^{17}\text{ kg/m}^3$ and mass of $19.926 \times 10^{-27}\text{ kg}$. Its mass number A is approximately :
(Take $R_0 = 1.2 \times 10^{-15}\text{ m}$, $4\pi = 12.56$)

- (1) 12
- (2) 19
- (3) 20
- (4) 16

11. A rectangular wire loop of sides 8 cm and 3 cm with a small cut, is moving out of a region of uniform magnetic field of magnitude 0.3 T directed normal to the plane of the loop. The emf developed across the cut, if the velocity of the loop is 2 cm s^{-1} , in a direction normal to the shorter side of the loop, will be :

- (1) $1.8 \times 10^{-4}\text{ volt}$
- (2) $1.2 \times 10^{-4}\text{ volt}$

- (3) 1.3×10^{-4} volt
(4) 4.8×10^{-4} volt
-

12. A galvanometer of resistance 100Ω gives full scale deflection for a current of 1 mA. It is converted into an ammeter of range 0 – 10 A. The shunt required is :

- (1) 0.01Ω
(2) 0.10Ω
(3) 0.001Ω
(4) 1.0Ω
-

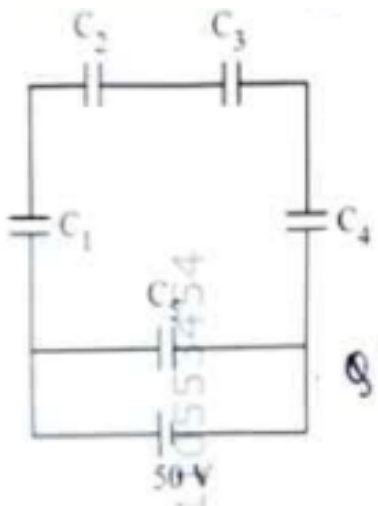
13. In Young's double slit experiment, using monochromatic light of wavelength λ , the intensity of light at a point on the screen where the path difference is λ is K units. The intensity of light at a point where the path difference is $\lambda/3$ will be :

- (1) $\frac{K}{4}$
(2) K
(3) $\frac{K}{2}$
(4) $2K$
-

14. The magnitude and direction of the acceleration produced in a body of mass 5 kg when two mutually perpendicular forces 8 N and 6 N act on it, are respectively :

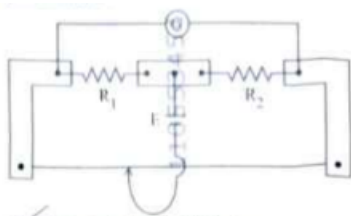
- (1) 2 m s^{-2} ; $\tan^{-1}(3/4)$ with 6 N force
(2) 2 m s^{-2} ; $\tan^{-1}(4/3)$ with 8 N force
(3) 2 m s^{-2} ; $\tan^{-1}(3/4)$ with 8 N force
(4) 20 m s^{-2} ; $\tan^{-1}(4/3)$ with 8 N force
-

15. Five capacitors of capacitances $C_1 = C_2 = C_3 = C_4 = 10 \mu\text{F}$ and $C_5 = 2.5 \mu\text{F}$ are connected as shown, along with a battery of 50 V. The equivalent capacitance and the charges on each capacitor respectively are :



- (1) $5\ \mu\text{F}$, $125\ \mu\text{C}$ on all capacitors
- (2) $5\ \mu\text{F}$, $250\ \mu\text{C}$ on all capacitors
- (3) $4\ \mu\text{F}$, $250\ \mu\text{C}$ on C_1 to C_4 and $125\ \mu\text{C}$ on C_5
- (4) $5\ \mu\text{F}$, $125\ \mu\text{C}$ on C_1 to C_4 and $25\ \mu\text{C}$ on C_5

16. In a metre bridge experiment, the positions of the cell, E , and galvanometer, G , are interchanged. We shall observe in the galvanometer :



- (1) Only the right-sided deflection
- (2) Only the left-sided deflection
- (3) There will be no deflection irrespective of the position of the jockey
- (4) Both right-sided and left-sided deflection and at balance point, no deflection

17. The power of a crane, which lifts a mass of $1000\ \text{kg}$ to a height of $20\ \text{m}$ in $10\ \text{s}$ is : ($g = 9.8\ \text{m/s}^2$)

- (1) $19.6\ \text{W}$
- (2) $39.2\ \text{W}$

(3) 39.2 kW

(4) 19.6 kW

18. Match List I with List II :

List I	List II
A. Young's Modulus	I. $\frac{\Delta d/d}{\Delta L/L}$
B. Compressibility	II. $\frac{FL}{A(\Delta L)}$
C. Bulk Modulus	III. $-\frac{1}{\Delta P} \left(\frac{\Delta V}{V} \right)$
D. Poisson's Ratio	IV. $-P \left(\frac{V}{\Delta V} \right)$

Choose the correct answer from the options given below :

(1) A-I, B-IV, C-III, D-II

(2) A-IV, B-I, C-II, D-III

(3) A-III, B-II, C-I, D-IV

(4) A-II, B-III, C-IV, D-I

19. In a concave lens, a ray of light emanating from the object parallel to the principal axis of the lens, after refraction :

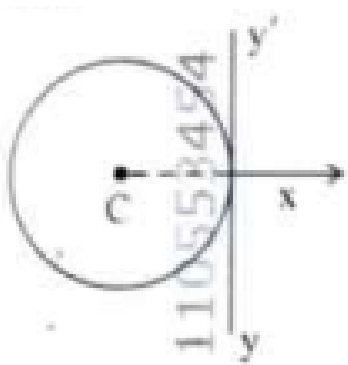
(1) emerges parallel to the principal axis.

(2) appears to diverge from the first principal focus.

(3) passes through $2F$, which is the radius of curvature of the lens.

(4) passes through the second principal focus.

20. A thin wire of length 'L' and linear mass density 'm' is bent into a circular ring (in x-y plane) with centre 'C' as shown in figure. The moment of inertia of the ring about an axis yy' will be :



- (1) $\frac{3mL^3}{8\pi^2}$
 (2) $\frac{3mL^3}{8\pi}$
 (3) $\frac{3mL^2}{8\pi^2}$
 (4) $\frac{3mL^2}{8\pi}$

21. Each side of a metallic cube of mass 5.580 kg is measured to be 9.0 cm. Keeping the significant figures in view, the density of the material of the cube can be best expressed as $X \times 10^3 \text{ kg m}^{-3}$, where the value of X is :

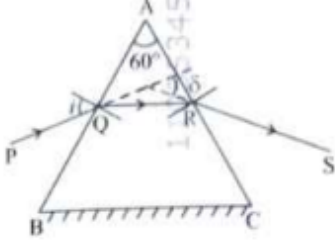
- (1) 7.654
 (2) 7.7
 (3) 7.65
 (4) 7.6

22. For a travelling harmonic wave $y(x, t) = 2.0 \cos 2\pi(10t - 0.0080x + 0.35)$, where x and y are in cm and t in s. The phase difference between oscillatory motion of two points separated by a distance of 0.5 m is :

- (1) 8π rad
 (2) 0.08π rad
 (3) 0.008π rad
 (4) 0.8π rad

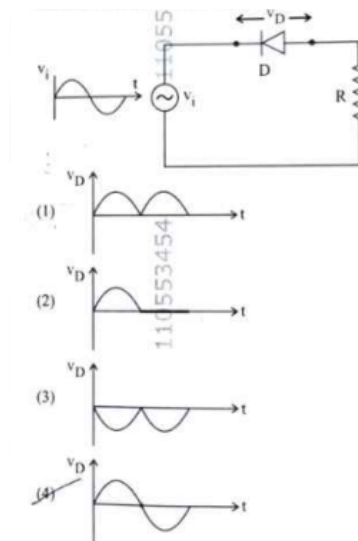
23. A ray of monochromatic light is passing through an equilateral prism (ABC) as shown in the figure. The refracted ray (QR) is parallel to its base (BC) and the angle of incidence (i) is

50°. Then the angle of deviation (δ) is :



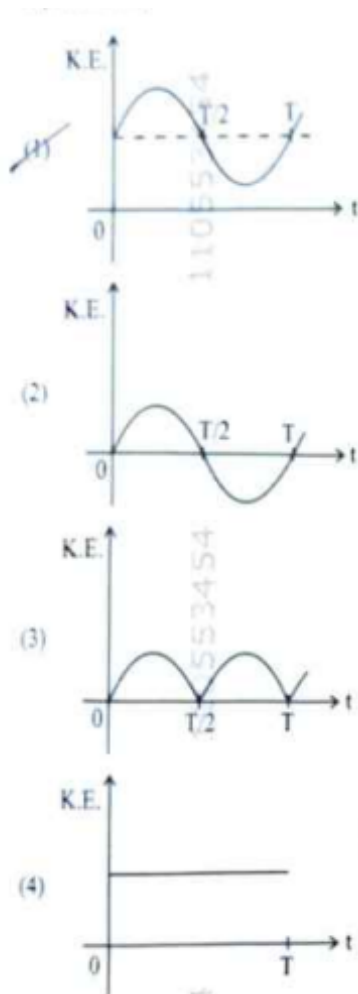
- (1) 40°
- (2) 45°
- (3) 55°
- (4) 35°

24. In the circuit shown below, the voltage appearing across the diode D will be of the form :



- (1) (Positive half-wave signal)
- (2) (Inverted positive half-wave signal)
- (3) (Full sine wave with positive peaks clipped)
- (4) (Voltage is zero for positive half cycle and matches input for negative half cycle)

25. For a simple pendulum, having time period T , the variation of kinetic energy (K.E.) with time (t) is represented by :



- (1) (Waveform that is strictly positive with period $T/2$)
 (2) (Standard sine wave including negative values)
 (3) (Waveform with period T)
 (4) (Constant line)

26. A resistor is connected to a battery of 12 V emf and internal resistance 2Ω . If the current in the circuit is 0.6 A, the terminal voltage of the battery is :

- (1) 10 V
 (2) 10.8 V
 (3) 12 V
 (4) 1.2 V

27. The amount of work done to raise a mass 'm' from the surface of the Earth to a height

equal to the radius of the Earth 'R', will be :

- (1) $2mgR$
 - (2) mgR
 - (3) $\frac{mgR}{4}$
 - (4) $\frac{mgR}{2}$
-

28. An electric heater supplies heat to a system at a rate of 100 W. If the system performs work at a rate of 75 J/s, then the rate at which internal energy increases will be :

- (1) 125 W
 - (2) 100 W
 - (3) 25 W
 - (4) 75 W
-

29. A room heater is rated 400 W, 220 V. If the supply voltage drops to 200 V, what will be the power consumed (approximately) ?

- (1) 121 W
 - (2) 331 W
 - (3) 200 W
 - (4) 400 W
-

30. When a ruler falls vertically, 5 different persons catch it with different reaction times.
($g = 9.8 \text{ m s}^{-2}$)

Person A has reaction time of 0.20 s

Person B has reaction time of 0.22 s

Person C has reaction time of 0.18 s

Person D has reaction time of 0.19 s

Person E has reaction time of 0.21 s

What is the correct order of the distance travelled by the ruler for each person ?

- (1) $C > D > A > B > E$
 - (2) $C > D > A > E > B$
 - (3) $B > E > A > C > D$
 - (4) $B > E > A > D > C$
-

31. Consider two uncharged capacitors of equal capacitance 200 pF. One of them is charged by a 100 V supply and disconnected. Now this capacitor is connected to the uncharged capacitor. The amount of electrostatic energy lost in the process is :

- (1) $1.0 \times 10^{-6} \text{ J}$
 - (2) $0.5 \times 10^{-6} \text{ J}$
 - (3) 0.5 J
 - (4) 1.0 J
-

32. Savitha, a XI standard student, while conducting an experiment to determine the effective length of a simple pendulum L, notes down the data of time taken to complete 30 oscillations as 60 s and hence calculates the length of the simple pendulum as :

(Take $\pi^2 = 9.87$ and $g = 9.8 \text{ m/s}^2$)

- (1) 2 m
 - (2) 0.75 m
 - (3) 1.5 m
 - (4) 1 m
-

33. The peak value of an alternating current is 5 A and frequency is 60 Hz. How long will the current, starting from zero, take to reach the peak value ?

- (1) $\frac{1}{240} \text{ s}$
 - (2) $\frac{1}{30} \text{ s}$
 - (3) $\frac{1}{120} \text{ s}$
 - (4) $\frac{1}{60} \text{ s}$
-

34. In interference and diffraction, the light energy is redistributed. If it reduces in one region, producing a dark fringe, it increases in another region, producing a bright fringe.

A. As there is no gain or loss of energy, these phenomena are consistent with the principle of conservation of energy.

B. Diffraction and interference are characteristics exhibited only by light waves.

Choose the correct answer from the options given below :

- (1) A is true, but B is false
 - (2) A is true and B is also true
 - (3) A is false, but B is true
 - (4) Both A and B are false
-

35. A box of mass 15 kg is kept on the floor of a stationary trolley. The coefficient of static friction between the box and the trolley is 0.12. Keeping the box in stationary state over the trolley, the maximum acceleration with which the trolley can be moved horizontally in m s^{-2} is : ($g = 10 \text{ m/s}^2$)

- (1) 1.5
 - (2) 1.8
 - (3) 2.1
 - (4) 1.2
-

36. The sum of kinetic energy and potential energy of a simple pendulum bob is 0.02 joule. The speed of the simple pendulum bob at equilibrium position is approximately :
(Consider mass of the bob = 20 g)

- (1) 1.41 m/s
 - (2) 14.1 m/s
 - (3) 0.2 m/s
 - (4) 2.0 m/s
-

37. Four statements are given (A is mass number) :

A. The volume of a nucleus is proportional to $A^{1/3}$.

- B. The volume of a nucleus is proportional to A.
C. The difference in mass of an atom and its nucleus is called the mass defect.
D. The difference in mass of a nucleus and its constituents is called the mass defect.
Choose the correct answer from the options given below :

- (1) B and D are true, but A and C are false
(2) A and D are true, but B and C are false
(3) A and C are true, but B and D are false
(4) B and C are true, but A and D are false
-

38. The angular speed of a flywheel is increased from 600 rpm to 1200 rpm in 10 s. The number of revolutions completed by the flywheel during this time is :

- (1) 600
(2) 900
(3) 300
(4) 150
-

39. A submarine is designed to withstand an absolute pressure of 100 atm. How deep can it go below the water surface ?

(Consider density of water = 1000 kg m^{-3} , $1 \text{ atm} = 1 \times 10^5 \text{ Pa}$ and $g = 10 \text{ m/s}^2$)

- (1) 9900 m
(2) 99 m
(3) 9000 m
(4) 990 m
-

40. Match List I with List II :

List I (Electromagnetic wave) - List II (Production)

- A. Microwave - I. Electrons in atoms emit light when they move from higher to lower level
B. Visible light - II. Radioactive decay of nucleus
C. Gamma rays - III. Vibration of atoms and molecules
D. Infra-red rays - IV. Klystron valve or magnetron valve

Choose the correct answer from the options given below :

- (1) A-III, B-I, C-II, D-IV
 - (2) A-III, B-IV, C-I, D-II
 - (3) A-IV, B-III, C-II, D-I
 - (4) A-IV, B-I, C-II, D-III
-

41. Which of the following statements are correct ?

- A. Inside a conductor, the electrostatic field is zero.
- B. Electric field at the surface of a charged conductor does not depend on its surface charge density.
- C. The interior of a charged conductor can have no excess charge in the static situation.
- D. At the surface of a charged conductor, electrostatic field must be normal to the surface at every point.
- E. The electrostatic potential is zero everywhere inside a charged conductor.

Choose the correct answer from the options given below :

- (1) C, D and E only
 - (2) A, B and D only
 - (3) A, C and D only
 - (4) A, B, C and E only
-

42. For a metal of work function 6.6 eV, which of the following wavelengths of incident radiation does *not* give rise to the photoelectric effect ?

(Take Planck's constant as 6.6×10^{-34} J s)

- (1) 200 nm
 - (2) 150 nm
 - (3) 100 nm
 - (4) 50 nm
-

43. In the first excited state of hydrogen atom, the energy of its electron is -3.4 eV. The radial distance of the electron from the hydrogen nucleus in this case is approximately :

(Take $1 \text{ eV} = 1.6 \times 10^{-19} \text{ J}$, $e = 1.6 \times 10^{-19} \text{ C}$ and $\frac{1}{4\pi\epsilon_0} = 9 \times 10^9 \text{ N m}^2/\text{C}^2$)

- (1) $2.1 \times 10^{-8} \text{ m}$
 - (2) $2.1 \times 10^{-11} \text{ m}$
 - (3) $2.1 \times 10^{-9} \text{ m}$
 - (4) $2.1 \times 10^{-10} \text{ m}$
-

44. Two statements are given below :

A. When the forward bias voltage across a p-n junction diode increases above a certain threshold voltage, the diode current increases significantly.

B. This current is called reverse saturation current.

Choose the correct answer from the options given below :

- (1) Both Statements A and B are false
 - (2) Statement A is true, but Statement B is false
 - (3) Both Statements A and B are true
 - (4) Statement A is false, but Statement B is true
-

45. A flask contains argon and chlorine in the ratio of 2 : 1 by mass. The temperature of the mixture is 27°C . The ratio of root mean square speed of the molecules of the two gases $\frac{v_{\text{rms}}^{\text{Ar}}}{v_{\text{rms}}^{\text{Cl}_2}}$ is :
(Atomic mass of argon = 40.0 u and molecular mass of chlorine = 70.0 u)

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