

Examrace

Competitive Exams Physics Objective Questions Part 4

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Q-1. Rectifier converts

- (a) Mechanical energy to electrical energy
- (b) A. C to D. C
- (c) Light energy to electrical energy
- (d) None of these

Q-2. What is the dimension of $k = \frac{1}{4\pi\epsilon_0}$?

- (a) $C^2 N^{-1} m^{-2}$
- (b) $Nm^2 C^{-2}$
- (c) $Nm^2 C^2$
- (d) Unit less

Q-3 For formation of permanent magnets, the material should have

- (a) High coercivity
- (b) Low coercivity
- (c) High retentivity
- (d) Both (a) and (c)

Q-4. In order to obtain a real image of magnification 2 using a converging lens of focal length 20 cm, where should be an object be placed?

- (a) 50 cm
- (b) 30 cm
- (c) -50 cm
- (d) -30 cm

Q-5. A ball is dropped from a height of 20 cm. Ball rebounds to a height of 10 cm. What is the loss of energy?

- (a) 25 %
- (b) 75 %
- (c) 50 %
- (d) 100 %

Q-6. When you move from equator to pole, the value of acceleration due to gravity (g)

- (a) Increases
- (b) Decreases
- (c) Remains the same
- (d) Increases then decreases.

Q-7. A simple pendulum has time period T . The bob is given negative charge and surface below it is given positive charge. The new time period will be

- (a) less than T
- (b) Greater than T
- (c) Equal to T
- (d) infinite

Q-8. A bullet loses $1/20$ of its velocity after penetrating a plank. How many plank are required to stop the bullet?

- (a) 6
- (b) 9
- (c) 11
- (d) 13

Q-9. An aero plane 400 m from north and 300 m south and then flies 1200 m upwards, then net displacement is

- (a) 1200 m
- (b) 1300 m
- (c) 1400 m
- (d) 1500 m

Q-10. Which law follows the law of conservation of energy?

- (a) Lenz's law
- (b) Kirchhoff's law

(c) Maxwell's law

(d) Ampere's law

Q-11. Isogonics lines on magnetic map have

(a) Zero angle of dip

(b) Zero angle of declination

(c) Same angle of declination

(d) Same angle of dip

Q-12. Pressure gradient has the same dimension as that of

(a) Velocity gradient

(b) Energy gradient

(c) Potential gradient

(d) None of these

Q-13. If fundament frequency of closed pipe is 50 Hz, then frequency of 2nd overtone is

(a) 100 Hz

(b) 50 Hz

(c) 250 Hz

(d) 150 Hz

Q-14. A boat of mass 40 kg is at rest. A dog of mass 4 kg moves in the boat with a velocity of 10 m/s. What is the velocity of boat?

(a) $4\frac{m}{s}$

(b) $8\frac{m}{s}$

(c) $2\frac{m}{s}$

(d) $1\frac{m}{s}$

Q-15. Which of the following has negative temperature coefficient of resistance?

(a) Copper

(b) Aluminum

(c) Iron

(d) Germanium

Q-16 At which place, earth's magnetism become horizontal?

(a) Magnetic pole

(b) Geographical pole

(c) Magnetic meridian

(d) Magnetic equator

Q-17. Magnetic dipole moment is a

(a) Scalar quantity

(b) Vector quantity

(c) Constant quantity

(d) None of these

Q-18. What is the shape when a non-wetting liquid is placed in a capillary tube?

(a) Concave upward

(b) Convex upward

(c) Concave downward

(d) Convex downward

Q-19. Application of Bernoulli's theorem can be seen in

(a) Dynamic lift of aero plane

(b) Hydraulic press

(c) Helicopter

(d) None of these

Q-20. Unit of reduction factor is

(a) ampere

(b) Ohms

(c) Teals

(d) Weber

Q-21. Huygens wave theory allows us to know

(a) The wavelength of the wave

(b) The velocity of the wave

- (c) The amplitude of the wave
- (d) The propagation of wave fronts

Answer;

Q-22. Which of the following is secondary cell?

- (a) Voltaic cell
- (b) Daniel cell
- (c) Leclanche cell
- (d) Edison cell

Q-23. Poisson's ration cannot have the value

- (a) Air
- (b) Iron
- (c) Air and iron
- (d) None of these

Q-24. if a thermometer reads freezing point of water as $20^{\circ}C$ and boiling point as $150^{\circ}C$, how much thermometer read when the actual temperature is $60^{\circ}C$?

- (a) $98^{\circ}C$
- (b) $110^{\circ}C$
- (c) $40^{\circ}C$
- (d) $60^{\circ}C$

Q-25. Apparatus used to find out velocity of sound in gas is

- (a) Meade's apparatus
- (b) Kundt's tube
- (c) Quince's tube
- (d) none of these

Q-26. When the atmospheric temperature becomes nearly equal to the dew point, then

- (a) Relative humidity is 100 %
- (b) Relative humidity is 90 %
- (c) Relative humidity is 50 %
- (d) Nothing can be said

Q-27. Current provided by a battery is maximum when

- (a) Internal resistance equal to external resistance
- (b) Internal resistance is greater than external resistance
- (c) Internal resistance is less than external resistance
- (d) None of these

Q-28. If the temperature of atmosphere is increased the following character of sound waves is affected.

- (a) Amplitude
- (b) Frequency
- (c) Velocity
- (d) Wave length

Q-29. A thin aluminum sheet is placed between the plates of a parallel plate capacitor. Its capacitance will

- (a) Increases
- (b) Decreases
- (c) Remain same
- (d) Become infinite

Q-30. A heater coil connected to a supply of a 220 V dissipating some power p_1 . The coil is cut into half and the two halves are connected in parallel. The heater now dissipates a power p_2 the ration of power $p_1 : p_2$ is

- (a) 2: 1
- (b) 1: 2
- (c) 1: 4
- (d) 4: 1

Q-31. Order of e/m ratio of proton, α -particle and electron is

- (a) $e > p > \alpha$
- (b) $p > \alpha > e$
- (c) $e > \alpha > p$
- (d) None of these

- Q-32. A body is projected with zero velocity from the top of a tower and it reaches the ground in 4 sec. Calculate the distance travelled
- (a) 80 m
 - (b) 90 m
 - (c) 160 m
 - (d) 40 m
- Q-33. Ultraviolet rays are used in
- (a) To detect scripture of old monuments
 - (b) Forensic labs
 - (c) Green house effect
 - (d) None of these
- Q-34. A ray of light passing through the optic centre of a thick lens is
- (a) Displaced and deviated
 - (b) Displaced but not deviated
 - (c) Not displaced and but deviated
 - (d) None of these
- Q-35. According to Bohr's postulates which of the following quantities takes discrete values?
- (a) Kinetic energy
 - (b) Potential energy
 - (c) Angular momentum
 - (d) Momentum
- Q-36. An electron moves with uniform velocity and enters a region of uniform magnetic field B . If V and B are parallel to each other, then the electron will
- (a) Continue to move in the same direction
 - (b) Move in a direction perpendicular to B
 - (c) Move in a circular path
 - (d) Will not move.
- Q-37. The energy released per fission of a ${}_{92}\text{U}^{235}$ nucleus is nearly

- (a) 200 eV
- (b) 20 MeV
- (c) 200 MeV
- (d) 2000 eV

Q-38. Astigmatism can be corrected by using

- (a) Biofocal lenses
- (b) Concave spherical lenses
- (c) Plane convex lenses
- (d) Cylindrical lenses

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Q-40. Blue color of the sky is due to

- (a) Scattering of light
- (b) Dispersion of light
- (c) Interference
- (d) Sun emits more of blue light