

Navik GD Physics Paper 21 March 2021 (All Shifts)

20 Questions

Que. 1 The resistivity of material depends on

1. Length of conductor
2. Area of cross section
3. Type of material
4. All the above

Solution Correct Option - 3

Que. 2 The process of superimposing signal frequency (i.e. audio wave) on the carrier wave is known as

1. Transmission
2. Reception
3. Modulation
4. Detection

Solution Correct Option - 3

Que. 3 Unidirectional property of p-n junction diode is utilized in

1. transistor
2. rectifier
3. amplifier
4. oscillator

Solution Correct Option - 2

Que. 4 Quantization of electric charge is demonstrated by:

1. Millikan's oil drop experiment
2. Thompson's experiment
3. Rutherford's α -ray scattering experiment
4. Stern-Gerlach experiment

Solution Correct Option - 1

Que. 5 Most of the energy produced by the sun is due to

1. nuclear fission
2. nuclear fusion
3. chemical reaction
4. gravitational collapse

Solution Correct Option - 2

Que. 6 In Huygens principle, the relation between wavefront and the ray of light is-

1. Ray of light is perpendicular to the wavefront
2. Ray of light is parallel to the wavefront

3. Ray of light is tangential to the wavefront
4. Ray of light coincides exactly with the wavefront

Solution Correct Option - 1

Que. 7 The focal length of the convex mirror is 50 cm. If the image formed is half of the size of the object, the distance of the object from the mirror is:

1. 50 cm
2. 25 cm
3. 100 cm
4. 20 cm

Solution Correct Option - 1

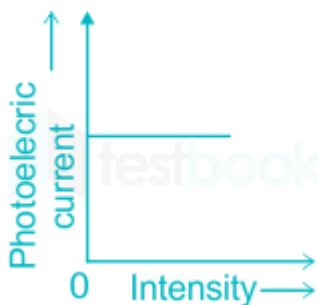
Que. 8 Two infinite plane parallel sheets having surface charge density $+\sigma$ and $-\sigma$ are kept parallel to each other at a small separation distance d . The electric field at any point in the region between the plates is

1. zero
2. $\frac{\sigma}{\epsilon_0}$
3. $\frac{\sigma}{2\epsilon_0}$
4. $\frac{\sigma}{3\epsilon_0}$

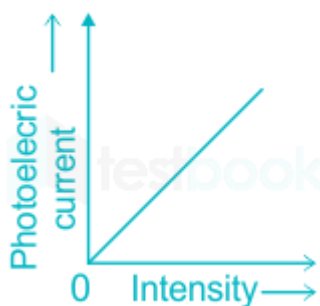
Solution Correct Option - 2

Que. 9 Which of the following represent the relation between photoelectric current and intensity of light?

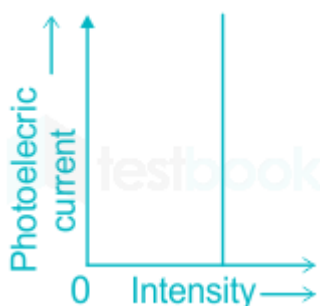
1.



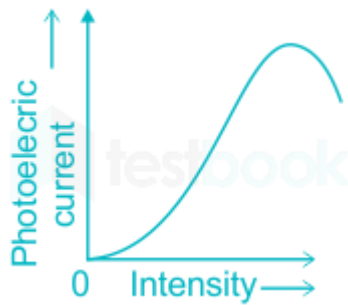
2.



3.



4.



Solution Correct Option - 2

Que. 10 Three-Point charges enclosed by a surface 'S' are 10C, -5C, -5C. Find the total flux passing through 'S'

1. $\frac{20}{\epsilon_0}$
2. $\frac{10}{\epsilon_0}$
3. $\frac{5}{\epsilon_0}$
4. 0

Solution Correct Option - 4

Que. 11 A simple pendulum has a period of 2 sec. Find its length if $g = 9.8 \text{ m/s}^2$.

1. 0.79 m
2. 0.99 m
3. 0.89 m
4. None of the above

Solution Correct Option - 2

Que. 12 If the increase in internal energy of the system is 100 J, when 200 J heat is given to the system, then the work done will be:

1. 200 J
2. 300 J
3. 100 J
4. 0 J

Solution Correct Option - 3

Que. 13 Which of the following statement is correct regarding the principle of conservation of energy.

1. There is no proof for this principle.
2. This principle has no violations or exceptions.
3. Both 1 and 2
4. Neither 1 nor 2

Solution Correct Option - 3

Que. 14 If the kinetic energy of a body is increased by 125%, then its momentum will increase by:

1. 25%
2. 50%

3. 75%
4. 125%

Solution Correct Option - 2

Que. 15 A boxer moves his head backward while he receive a punch to the head. This is done to

1. increase the contact time and avoid getting hurt
2. decrease the contact time and avoid getting hurt
3. create confusion to the opponent
4. to increase the momentum

Solution Correct Option - 1

Que. 16 During projectile motion, the acceleration of the particle in the horizontal direction is:

1. Equal to g
2. Zero
3. Less than g
4. More than g

Solution Correct Option - 2

Que. 17 Two forces of magnitudes $2F$ and $\sqrt{2}F$ act such that the resultant force is $\sqrt{10} F$. Then find the angle between the two forces.

1. 45°
2. 90°
3. 120°
4. 30°

Solution Correct Option - 1

Que. 18 A racing car accelerates on a straight road from rest to the speed of 160 m/s in 10 s. Assuming uniform acceleration of the car throughout, the distance covered in this time will be

1. 8 m
2. 800 m
3. 8000 m
4. 1.6×10^2 m

Solution Correct Option - 2

Que. 19 We can remove the end error of meter bridge experiment by

1. changing the wire used in the meter bridge
2. repeating the experiment by changing known and unknown resistances
3. taking average value of resistances determined using 2)
4. both 2) and 3)

Solution Correct Option - 4

Que. 20 Which of the following statement is correct regarding AC generators?

1. It converts mechanical energy into electrical energy.
2. It works on the principle of Faraday's Law.
3. Generated energy can be in the form of sinusoidal waveform
4. All of the above statements are correct regarding AC generators.

Solution Correct Option - 4