

ELECTRICITY

Multiple Choice QUESTIONS

Question 1: Which of the following statements does not represent ohm's law?

1. current / potential difference = constant
2. potential difference / current = constant
3. potential difference = current x resistance
4. current = resistance x potential difference

Answer: 4

Question 2: The unit of current is _____.

1. ampere
2. watt
3. volt
4. coulomb

Answer: 1

Question 3: The potential difference required to pass a current 0.2 A in a wire of resistance 20W is ____.

1. 100 V
2. 4 V
3. .01 V
4. 40 V

Answer: 2

Question 4: The resistance of an electric bulb drawing 1.2 A current at 6.0 V is _____.

1. 0.5 W
2. 5 W
3. 0.2 W
4. 2 W

Answer: 2

Question 5: The unit of resistivity is _____.

1. ohm
2. ohm / m
3. ohm-m
4. mho

Answer: 3

Question 6: Two resistances of 100 W and zero ohm are connected in parallel. The overall resistance will be

1. 100 W
2. 50 W
3. 25 W
4. zero ohm

Answer: 1

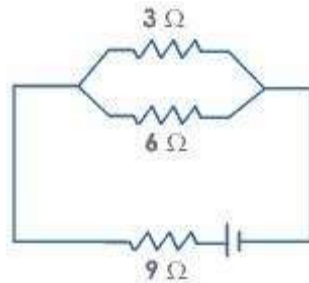
ELECTRICITY

Question 7: Three resistors 2 W , 3 W and 4 W are connected so that the equivalent resistance is 9 W .
The resistors are connected _____.

1. all in series
2. all in parallel
3. 2 W and 3 W in parallel and the combination in series with 4 W
4. 2 W and 3 W in series and the combination in parallel to 4 W

Answer: 1

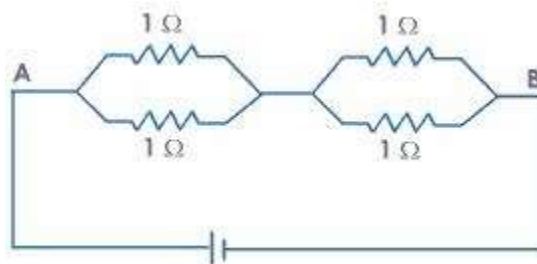
Question 8: In the figure,



1. 6 W , 3 W and 9 W are in series
2. 9 W and 6 W are in parallel and the combination is in series with 3 W
3. 3 W , 6 W and W are in parallel
4. 3 W , 6 W are in parallel and 9 W is in series

Answer: 4

Question 9: The resistance across AB is



1. 4 Ω
2. 1 Ω
3. 2 Ω
4. 0.5 Ω

Answer: 2

Question 10: When a current 'I' flows through a resistance 'R' for time 't' the electrical energy spent is given by _____.

1. I R t
2. I² R t
3. I R² t
4. I² R / t

Answer: 2

ELECTRICITY

Question 11: Kilowatt - hour is the unit of _____.

1. potential difference
2. electric power
3. electrical energy
4. charge

Answer: 3

Question 12: When a fuse is rated 8 A, it means _____.

1. it will not work if current is less than 8 A
2. it has a resistance of 8 W
3. it will work only if current is 8 A
4. it will melt if current exceeds 8 A

Answer: 4

Question 13: The device used for measuring potential difference is known as _____.

1. potentiometer
2. ammeter
3. galvanometer
4. voltmeter

Answer: 4

Question 14: The work done in moving a unit positive charge across two points in an electric circuit is a measure of _____.

1. current
2. potential difference
3. resistance
4. power

Answer: 2
this

Question 15: The potential at a point is 20 V. The work done to bring a charge of 0.5 C from infinity to point will be _____.

1. 20 J
2. 10 J
3. 5 J
4. 40 J

Answer: 2

Question 16: Joule / Coulomb is same as _____.

1. watt
2. volt
3. ampere
4. ohm

Answer: 2

ELECTRICITY

Question 17: The free electrons of a metal _____.

1. do not collide with each other
2. are free to escape through the surface
3. are free to fall into the nuclei
4. are free to move anywhere in the metal

Answer: 4

Question 18: The path of a free electron in a metal is _____.

1. parabolic
2. circular
3. a straight line
4. zig zag

Answer: 4

Question 19: Heat produced in a current carrying wire in 5s is 60 J. The same current is passed through another wire of half the resistance. The heat produced in 5 s will be _____.

1. 60 J
2. 30 J
3. 15 J
4. 120 J

Answer: 2

Question 20: The current in a wire _____.

1. depends only on the potential difference applied
2. depends only on the resistance of the wire
3. depends on both resistance and potential difference
4. does not depend on resistance and potential difference

Answer: 3

Question 21: When there is an electric current passing through a wire, the particles moving are _____.

1. electrons
2. protons
3. atoms
4. ions

Answer: 1

Question 22: A positive charge released from rest _____.

1. moves towards the regions of lower potential
2. moves towards the regions of higher potential
3. moves towards the regions of equal potential
4. does not move

Answer: 1

Question 23: Three equal resistances when combined in series are equivalent to 90 W . Their equivalent resistance when combined in parallel will be _____.

1. 270 W
2. 30 W
3. 810 W
4. 10 W

Answer: 4

ELECTRICITY

Question 24: An battery is used to _____.

1. maintain a potential difference
2. measure electric current
3. measure electric potential
4. safeguard against short - circuit

Answer: 1

Question 25: Ohm's law relates potential difference with _____.

1. power
2. energy
3. current
4. time

Answer: 3

Question 26: Which of the following is an ohmic resistor?

1. Diode
2. Germanium
3. Nichrome
4. Diamond

Answer: 3

Question 27: The resistivity of a wire depends on ____.

1. length
2. material
3. area of cross- section
4. length, material and area of cross- section

Answer: 4

Question 28: For which of the following substances, resistance decreases with temperature?

1. Copper
2. Platinum
3. Mercury
4. Carbon

Answer: 4

Question 29: Four cells each of e.m.f 'E' are joined in parallel to form a battery. The equivalent e.m.f of the battery will be _____.

1. 4 E
2. E
3. E / 4
4. E = 0

Answer: 2

Question 30: Two electric bulbs have resistances in the ratio 1:2. If they are joined in series, the energy consumed in them are in the ratio _____.

1. 1:2
2. 2:1
3. 4:1
4. 1:1

Answer: 2