Important Basic Electrical MCQs

In this post, some of the important Basic Electrical mcqs are given. It includes potential of earth, definition of potential, direction of current, unit of current, definition of resistance, definition of power, unit of resistivity, effect of temperature on resistance and reciprocal of resistance.

Basic Electrical MCQs 21 to 35

21 The potential of the earth is

(a)– 10 Volt

(b)10.0 Volt

(c)2.0 Volt

(d)Zero Volt

Correct Answer (d): Zero Volt

The earth's potential remains constant and it is equal to zero.

22 The difference in potential of two charged bodies is called as

(a)Electrical potential

(b)Potential difference

(c)Energy

(d)Charge

23   If the two charged bodies have same potential, the potential

difference between two bodies is equal to

(a)Zero volt

(b)+ 5 Volt

(c)– 5 Volt

(d)230 volt

The potential of charged body A is 25.0 V and that of B is 20.0 V,

therefore we can say that potential of A is higher than that of B. The

direction of current flows from A to B. if two charged body have

same potential, current is equal to zero.

24   The electric current flows due to

(a)Electrical potential

(b)Volt

(c)Potential difference

(d)Energy source

25 The potential of charged body A is +25.0 volt and that of body B

is +20 volt. The direction of current from

(a)Body A to B

(b)Body B to A

(c)Either (a) or (b)

(d)Both (a) and (b)

Basic Electrical MCQs 26 to 30

26 The unit of current is

(a)Coulomb / second

(b)Joule / second

(c)Watt / second

(d)Voltage

$I = Q/t$ = Coulomb / second

27 How many electrons per second flow through a conductor for

one ampere current?

(a)6.25×10^{18}

(b)1.6×10^{-19}

(c)1.89×10^{18}

(d)2.34×10^{18}

Correct Answer (a): 6.25×10^{18}

Charge of electron is 1.6×10^{-19}

for one ampere current, electrons per second = $1 / 1.6 \times 10^{-19}$

$= 6.25 \times 10^{18}$

28   A battery has emf of 24 volts, it means that it supplies _____

joules of energy to each coulomb of charge.

(a)Zero

(b)Twelve

(c)Twenty-four

(d)None of the above

Correct Answer (c): Twenty-four

Emf V = Wq

Where V = Voltage, W = Work done per charge and q = charge

V= 24 Voltage and q = 1 coulomb

W = V/q = 24/1 = 24

29 The rate of change of energy is known as

   (a)Voltage

   (b)Current

   (c)Power

   (d)kWh

   Correct Answer (c): Power

P = W / t

Power = Energy / second

Basic Electrical MCQs 31 to 35

30 The property of material which opposes the flow of current is

known as

   (a)Conductance

   (b)Resistance

   (c)Resistivity

   (d)Reluctance

   Correct Answer (b): Resistance

31 Acid and salt solutions are example of

(a)Insulator

(b)Semiconductor

(c)Conductor

(d)Both (b) and (c)

Correct Answer (c): Conductor

32 The unit of resistance is

(a)Ohm

(b)Mho

(c)Siemens

(d)Ohm - meter

Correct Answer (a): Ohm

33 One tera ohm is equal to

(a)10^6 Ω

(b)10^9 Ω

(c)10^{12} Ω

(d)10^{-12} Ω

Correct Answer (c): 10^{12} Ω

34 The resistance of a metallic conductor is directly proportional to

(a)Area

(b)Length

(c)1 / Area

(d)Both (b) and (c)

Resistance $R = \rho L/a$

Where R = Resistance,

ρ = Resistivity of material,

a = Area of conductor

L = Length of conductor

Therefore, $R \propto L$ and $R \propto 1/a$ because resistivity is constant for any material

35   The unit of resistivity is

(a)Ohm

(b)Ohm / m

(c)Ohm - meter

(d)Mho

36 As the temperature increases, the resistance of the insulator

(a)Increases

(b)Decreases

(c)Does not affect

(d)Any of the above

Correct Answer (b): Decreases

As the temperature increases, the resistance of electrolytes,

insulators decrease, therefore it has negative temperature co-

efficient of resistance.

37 As the temperature increases, the resistance of the conductor

(a)Increases

(b)Decreases

(c)Does not affect

(d)Any of the above

Correct Answer (a): Increases

As the temperature increases, the resistance of metal increases. The temperature – resistance graph is straight line. The metals have positive temperature co-efficient of resistance.

38   The resistance offered by a conductor having length of metre and area of one meter square is known as

    (a)Resistance

    (b)Conductance

    (c)Resistivity

    (d)Conductivity

    Correct Answer (c): Resistivity

Resistance R = ρL/a

a = 1 meter square and L = 1 meter

R = ρ(1)/(1)

Therefore R = ρ

So we can say that resistance is equal to resistivity when length is 1 meter and area is equal to 1 meter square.

39   Which of the following has least resistivity?

    (a)Gold

(b)Nickel

(c)Silver

(d)Annealed copper

Correct Answer (d): Annealed copper

40 The reciprocal of resistance is known as

(a)Conductance

(b)Conductivity

(c)Resistivity

(d)Permeability

Correct Answer (a): Conductance

Conductance = 1 / Resistance

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