

Railway Recruitment Cell

Post Name : 01C-Wireman

Exam Code : MASSXAIR

Exam Date : 21-06-2024

Exam Time : 11:15AM

Question No. 1

In a lead-acid battery, a vent cap is provided to-

- A) Facilitate the flow of gases
- B) Prevent the flow of gases
- C) Recover acid loss through vapours
- D) Reduce the tendency for polarization

Answer Key: A

Question No. 2

In a series DC machine, there is one field winding wound _____ with fewer turns and a large cross-sectional area.

- A) In the machine
- B) In the armature slots
- C) Over the main poles
- D) Separately

Answer Key: C

Question No. 3

Which of the following appliances does NOT require earth connection for safety?

- A) Washing machine
- B) Refrigerator
- C) Vacuum cleaner
- D) Electric cooker

Answer Key: C

Question No. 4

The colour bands for a 1.5 ohm resistor will be-

- A) Brown, Green, Brown
- B) Brown, Green, Gold
- C) Brown, Gold, Green
- D) Brown, Gold, Gold

Answer Key: B

Question No. 5

According to the BS1852 (British standard) coding standard for resistors, the letter 'R' represents-

- A) Kilo ohms
- B) Milli ohms
- C) Ohms
- D) Mega ohms

Answer Key: C

Question No. 6

Which of the following IE rules is/are applicable to service mains?

- A) Rule 30
- B) Rule 33
- C) Rule 77
- D) All of the options

Answer Key: D

Question No. 7

Which type of earthing is also called fire earthing?

- A) Plate earthing
- B) Rod earthing
- C) Strip earthing
- D) Beam earthing

Answer Key: B

Question No. 8

One coulomb/second is equal to-

- A) 1 volt
- B) 1 ampere
- C) 1 ohm
- D) 1 watt

Answer Key: B

Question No. 9

Three resistances of $2\ \Omega$, $2\ \Omega$ and $4\ \Omega$ are connected in parallel. Find the equivalent resistance for the system.

- A) $1/2\ \Omega$
- B) $3/2\ \Omega$
- C) $4\ \Omega$
- D) $4/5\ \Omega$

Answer Key: D

Question No. 10

A Wheatstone bridge is a _____ shaped circuit.

- A) Circle
- B) Triangle
- C) Diamond
- D) Semicircle

Answer Key: C

Question No. 11

Which type of joint is used to join earthing wires?

- A) Pigtail joint
- B) Tee joint
- C) Straight-twist joint
- D) Britannia joint

Answer Key: D

Question No. 12

Pin type insulators are used for-

- A) Low voltage lines
- B) High voltage lines
- C) Medium voltage lines
- D) Extra-high voltage lines

Answer Key: C

Question No. 13

The minimum size of the earth lead should NOT be smaller than-

- A) 8 SWG
- B) 7 SWG
- C) 6 SWG
- D) 5 SWG

Answer Key: A

Question No. 14

Which of the following is considered as an old technology and NOT in common use?

- A) MCB
- B) MCCB
- C) RCCB
- D) ELCB

Answer Key: D

Question No. 15

Which of the following is a voltage sensitive device?

- A) MCB
- B) MCCB
- C) RCCB
- D) ELCB

Answer Key: D

Question No. 16

The CGS unit of magnetomotive force is-

- A) Tesla
- B) Weber
- C) Ampere
- D) Gilbert

Answer Key: D

Question No. 17

An RLC circuit is used as a-

- A) Low-pass filter
- B) High-pass filter
- C) Band-pass filter
- D) All of the options

Answer Key: D

Question No. 18

Which of the following is also known as a mechanical rectifier?

- A) Commutator
- B) Brush
- C) Field poles
- D) Armature

Answer Key: A

Question No. 19

In the shell-type construction of the transformer, the magnetic core consists of _____ vertical limb(s).

- A) One
- B) Two
- C) Three
- D) Four

Answer Key: C

Question No. 20

What is the value of a resistor having a colour coding of orange-orange-silver-brown?

- A) 33 Ω
- B) 44 Ω

C) 0.33 Ω

D) 0.44 Ω

Answer Key: C

Question No. 21

Eight cells, each with an internal resistance of 0.2 Ω and an EMF of 2.2 V, are connected in series. What is the total EMF of the batteries?

A) 10 V

B) 17.6 V

C) 21 V

D) 23.7 V

Answer Key: B

Question No. 22

Which of the following types of fire extinguisher is used on electrical equipment?

A) Halon type

B) Foam type

C) Gas-cartridge type

D) Stored-pressure type

Answer Key: A

Question No. 23

The maximum load for a single light, single fan sub-circuit should NOT exceed-

A) 800 watts

B) 1000 watts

C) 1600 watts

D) 500 watts

Answer Key: A

Question No. 24

In CTS wiring, CTS stands for-

A) Cable-type sheathed

B) Core-type sheathed

C) Cable-tyre sheathed

D) Core-tyre sheathed

Answer Key: C

Question No. 25

The switch box/regulator box shall normally be mounted with their bottom at a distance of _____ from floor level.

A) 0.9 m

B) 1.25 m

C) 1.5 m

D) 2 m

Answer Key: B

Question No. 26

How is the creeping error controlled in energy meter?

A) By reducing rated voltage

B) By increasing the inductive load

C) By adjusting the brake magnet position

D) By drilling two holes diametrically opposite on disc

Answer Key: D

Question No. 27

Which country invented the 5S concept?

- A) Japan
- B) India
- C) Norway
- D) Vietnam

Answer Key: A

Question No. 28

Which of the following is an example of a striking tool?

- A) Scribing block
- B) V-Block
- C) Hammer
- D) File

Answer Key: C

Question No. 29

What is the background colour of warning signs in the basic category?

- A) Yellow
- B) Green
- C) Blue
- D) White

Answer Key: A

Question No. 30

Which Personal Protection Equipment (PPE) is used for protection against fumes?

- A) Goggles
- B) Apron
- C) Respirator
- D) Ear mask

Answer Key: C

Question No. 31

What is the application of the pin vice?

- A) Fixing the pins
- B) Holding the pins
- C) Drilling the pins
- D) Holding the studs

Answer Key: B

Question No. 32

Electric current is the _____ through a wire.

- A) Ionization of atoms
- B) Storage of charge
- C) Opposition to electrons
- D) Flow of electrons

Answer Key: D

Question No. 33

What is stored in a capacitor?

- A) Voltage
- B) Power
- C) Charge
- D) Current

Answer Key: C

Question No. 34

What is the frequency of direct current?

- A) Unity
- B) Zero
- C) 50 Hz
- D) Infinity

Answer Key: B

Question No. 35

Which of the following is NOT a passive component?

- A) Resistor
- B) Inductor
- C) Capacitor
- D) Transistor

Answer Key: D

Question No. 36

Which of the following is the property of a practical current source?

- A) Large internal resistance
- B) Small internal resistance
- C) Infinite internal resistance
- D) Zero internal resistance

Answer Key: A

Question No. 37

In an electric bulb, the filament becoming hot which in turn glows and produces light is an application of the _____ of electric current.

- A) Cooling effect
- B) Magnetic effect
- C) Chemical effect
- D) Lighting effect

Answer Key: D

Question No. 38

What are the two basic characteristics of resistors?

- A) Voltage and current
- B) Resistance and current
- C) Current and power
- D) Resistance and power

Answer Key: D

Question No. 39

The value of resistance CANNOT be changed after manufacture in-

- A) Fixed resistors
- B) Variable resistors
- C) Thermistors
- D) All of the options

Answer Key: A

Question No. 40

What is the minimum equivalent resistance that can be made using five resistors each of $1/5 \Omega$?

- A) $1/10 \Omega$
- B) $1/5 \Omega$

C) $1/25 \Omega$

D) 25Ω

Answer Key: C

Question No. 41

What is the combined resistance value when two resistors of $N \Omega$ and $2N \Omega$ are connected in parallel connection?

A) $N \Omega$

B) $N/2 \Omega$

C) $2N/3 \Omega$

D) $2N \Omega$

Answer Key: C

Question No. 42

Which of the following methods is used for measuring the value of medium resistances (1Ω to $100 \text{ k}\Omega$)?

A) Ohmmeter method

B) Direct deflection method

C) Wheatstone bridge method

D) Potentiometer method

Answer Key: C

Question No. 43

Which type of lugs are used for connecting an aluminum cable to a copper bus bar?

A) Bi-metallic cable connector

B) Copper lug

C) Insulated sleeve lug

D) Bi-metallic cable lug

Answer Key: D

Question No. 44

Which board is used for fixing switches, holders and sockets in electrical wiring?

A) Steel

B) Copper

C) Sunmica

D) Iron

Answer Key: C

Question No. 45

The distribution board is also known as the-

A) Electrical panel

B) Breaker panel

C) Panel board

D) All of the options

Answer Key: D

Question No. 46

What is the total number of cells present in a 12 V lead acid battery?

A) 4

B) 6

C) 3

D) 5

Answer Key: B

Question No. 47

Fillers are provided in the lead-acid battery to-

- A) Prevent the flow of gases
- C) Reduce the tendency of polarization

- B) Recover acid loss through vapours
- D) Facilitate the flow of gases

Answer Key: D

Question No. 48

_____ chargers vary the voltage they apply to the battery to maintain a constant current flow, switching off when the voltage reaches the level of a full charge.

- A) Constant current
- C) Pulsed charging
- B) Constant voltage
- D) Burp charging

Answer Key: A

Question No. 49

_____ feed charge current to a battery in pulses.

- A) Trickle chargers
- C) Constant voltage chargers
- B) Pulsed chargers
- D) Constant current chargers

Answer Key: B

Question No. 50

_____ is designed to compensate for the self discharge of the battery.

- A) Constant voltage charging
- C) Trickle charging
- B) Constant current charging
- D) Pulsed charging

Answer Key: C

Question No. 51

Which type of batteries are used in conventional petroleum-driven automobile cars?

- A) Zinc-oxide battery
- C) Lead-acid battery
- B) Zinc-cadmium battery
- D) Atomic battery

Answer Key: C

Question No. 52

Cells are connected in the _____ configuration when a higher terminal voltage is required.

- A) Parallel
- C) Delta
- B) Series
- D) Star

Answer Key: B

Question No. 53

When an 'n' number of cells are connected in parallel, the combined EMF is equal to-

(Where 'E' is the EMF of each cell)

- A) E^n
- C) E
- B) E/n
- D) nE

Answer Key: C

Question No. 54

Which of the following is a type of inverter?

- A) Sine-wave inverter
- B) Modified sine-wave inverter
- C) Square-wave inverter
- D) All of the options

Answer Key: D

Question No. 55

The _____ of solar cells is the percentage of incident power which the solar cell can convert to electricity.

- A) Transfer factor
- B) Power
- C) Capacity
- D) Efficiency

Answer Key: D

Question No. 56

The ratio of the root mean square value to the average value of an alternating quantity (current or voltage) is called the-

- A) Form factor
- B) Average value
- C) Peak value
- D) RMS value

Answer Key: A

Question No. 57

The maximum reverse-bias voltage that a diode can withstand without "breaking down" is called the-

- A) Peak inverse voltage
- B) Peak reverse voltage
- C) Diode reverse voltage
- D) Peak diode voltage

Answer Key: A

Question No. 58

_____ is the maximum allowable temperature for a diode's PN junction, usually given in degrees Celsius (°C).

- A) Operation diode temperature
- B) Operating junction temperature
- C) Modified junction temperature
- D) Maximum temperature

Answer Key: B

Question No. 59

Which of the following filters consists of two capacitors and one inductor?

- A) Shunt capacitor filter
- B) L-type filter
- C) Pi type filter
- D) Series inductor filter

Answer Key: C

Question No. 60

Which of the following IE rule sections deals with service lines and apparatus on consumers' premises?

- A) Section 51
- C) Section 39

- B) Section 73
- D) Section 30

Answer Key: D

Question No. 61

Which of the following is an output device used in computer systems?

- A) Microphone
- C) Keyboard
- B) Mouse
- D) Computer monitor

Answer Key: D

Question No. 62

Which of the following connectors is used for connecting a pair of loudspeakers to a personal computer?

- A) DB connector
- C) RCA connector
- B) BNC connector
- D) FTP connector

Answer Key: C

Question No. 63

What is the name for the identification given to a computer connection to a network?

- A) IP address
- C) System serial number
- B) Process ID
- D) SYSID

Answer Key: A

Question No. 64

Which method is often used for joining electronic components for making an electronic circuit?

- A) Brazing
- C) Soldering
- B) Spot welding
- D) Adhesive

Answer Key: C

Question No. 65

_____ are the components attached to the ending parts of the mainframe with a function to protect the bearings in the DC generator.

- A) Stators
- C) Yokes
- B) End housings
- D) Pole shoes

Answer Key: B

Question No. 66

The main function of the _____ is to minimize the friction between the rotating and stationary parts of the machine in a DC generator.

- A) Pole shoe
- C) End housings
- B) Yoke
- D) Bearings

Answer Key: D

Question No. 67

What is the secondary voltage of a transformer with primary turns 100 and secondary turns 400 for an applied primary voltage of 200 V?

- A) 800 V
- B) 80 V
- C) 3200 V
- D) 1600 V

Answer Key: A

Question No. 68

The transmission line helps in the movement of electricity from a power plant or power station to various-

- A) Commercial customers
- B) Power plants
- C) Residential customers
- D) Substations

Answer Key: D

Question No. 69

Which gas is used as the arc extinguishing medium in SF6 circuit breakers?

- A) Sulfur hexafluoride
- B) Sulfur dioxide
- C) Methane
- D) Nitrogen

Answer Key: A

Question No. 70

The skin effect in an AC system does NOT depend on the-

- A) Operating voltage
- B) Diameter of the conductor
- C) Operational frequency
- D) Shape of the conductor

Answer Key: A

Question No. 71

Which of the following electrical devices should be used under no-load conditions?

- A) Rewireable fuse
- B) Isolator
- C) Air-break switch
- D) Circuit breaker

Answer Key: B

Question No. 72

What are the terminals of a Unijunction transistor?

- A) Gate, drain and source
- B) Gate, drain, body and source
- C) Collector, base and emitter
- D) Emitter, base 1 and base 2

Answer Key: D

Question No. 73

In a cable, _____ is provided immediately above the metallic sheath.

- A) Bedding
- B) Armouring

C) Earthing connection

D) Labelling

Answer Key: A

Question No. 74

The TRS cables on a batten are suitable for-

A) Low voltage

B) Medium voltage

C) High voltage

D) Ultra high voltage

Answer Key: A

Question No. 75

What is the current flow in a circuit that consumes 40 W of power and has a supply voltage of 10 V?

A) 0.4 A

B) 4 A

C) 400 A

D) 4000 A

Answer Key: B