

Railway Recruitment Cell

Post Name : 02B-Mechanic Radio and TV

Exam Code : MASSXART

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Exam Time : 11:15AM

Question No. 1

Prohibiting signs are made in _____ shape.

- A) Square
- B) Triangular
- C) Oblong
- D) Circular

Answer Key: D

Question No. 2

The process of extinguishing fire by cutting the supply of oxygen by using a blanket, sand etc. is called-

- A) Cooling
- B) Smothering
- C) Blanketing
- D) Quenching

Answer Key: B

Question No. 3

The rivets used should preferably be made of _____ for joining two copper sheets together by riveting.

- A) Aluminium
- B) Silver
- C) Copper
- D) Brass

Answer Key: C

Question No. 4

All hand-tools should be protected-

- A) Against rusting
- B) Against dust
- C) Against hot climate
- D) Against dry air

Answer Key: A

Question No. 5

Copper is the most commonly used conductor because-

- A) It has a low resistivity
- B) It can be drawn into fine wires
- C) It is cheaper than silver
- D) All of the options

Answer Key: D

Question No. 6

An AVO meter can measure-

- A) Current
- B) Voltage
- C) Resistance
- D) All of the options

Answer Key: D

Question No. 7

The fundamental unit of measurements of the resistance is-

- A) Megaohm
- B) Milliohm
- C) Ohm
- D) Kiloohm

Answer Key: C

Question No. 8

A resistor is used in an electric circuit for-

- A) Blocking the flow of current
- B) Increasing the flow of current
- C) Reducing the flow of current
- D) None of the options

Answer Key: C

Question No. 9

Potentiometer is used to provide-

- A) A fixed resistance value
- B) A variable resistance value
- C) Any two resistance values
- D) A resistance value in steps

Answer Key: B

Question No. 10

A preset is a sort of-

- A) Variable capacitor
- B) Adjustable resistor
- C) Fixed value resistor
- D) Stepped value resistor

Answer Key: B

Question No. 11

The process of charging and discharging of a new cell is called-

- A) Cycling
- B) Loading
- C) Seasoning
- D) Pressurising

Answer Key: A

Question No. 12

The instrument used for measuring the Specific Gravity of electrolyte of a lead-acid battery is called-

- A) Lactometer
- B) Hydrometer
- C) Hygrometer
- D) Voltmeter

Answer Key: B

Question No. 13

Cells can be classified into two categories namely-

- A) Cylindrical cell and rectangular cell
- B) Dry cell and wet cell
- C) Primary cell and secondary cell
- D) Acid cell and alkali cell

Answer Key: C

Question No. 14

When a secondary cell is supplying current to the load, it is said to be-

- A) Loading
- B) Charging
- C) Discharging
- D) Unloading

Answer Key: C

Question No. 15

The magnetic lines of force move from _____ outside a magnet.

- A) South pole to north pole
- B) North pole to south pole
- C) North pole to free space
- D) Free space to north pole

Answer Key: B

Question No. 16

If the speed of the conductor rotating in a magnetic field is increased, the magnitude of induced EMF-

- A) Is decreased
- B) Is increased
- C) Becomes Zero
- D) Remains constant

Answer Key: B

Question No. 17

The average value of sinusoidal alternating current or voltage is equal to _____ times of the maximum or peak value.

- A) 0.637
- B) 0.707
- C) 1.1
- D) 1.414

Answer Key: A

Question No. 18

The ratio of RMS value to average value of Alternating Current is called-

- A) Peak factor
- B) Power factor
- C) Average factor
- D) Form factor

Answer Key: D

Question No. 19

The frequency of an alternator is given by-

- A) $120 / PN$
- B) $120P / N$
- C) $PN / 120$
- D) $120N / P$

Answer Key: C

Question No. 20

The power factor is of _____ nature in an inductive circuit.

A) Lagging

B) Leading

C) Unity

D) None of the options

Answer Key: A

Question No. 21

In star connection-

A) Line voltage = phase voltage

B) Line current = phase current

C) Line current = 3 x phase current

D) Line voltage = phase voltage / 3

Answer Key: B

Question No. 22

The generation and distribution of AC power is done in _____ in India.

A) Single phase

B) Two-phase

C) Three-phase

D) Four-phase

Answer Key: C

Question No. 23

Mutual inductance exists between two coils when they are placed-

A) Far away from each other

B) Close to each other

C) Perpendicular to each other

D) None of the options

Answer Key: B

Question No. 24

Transformer is a device used to-

A) Convert AC into DC

B) Convert DC into AC

C) Transfer electrical energy from one circuit to another without any direct connection

D) Change the frequency of the applied AC

Answer Key: C

Question No. 25

A three-phase transformer contains-

A) One primary and three secondary windings

B) Three primary and three secondary windings

C) Three primary and one secondary winding

D) Three primary and two secondary windings

Answer Key: B

Question No. 26

The transformer in which the secondary voltage is lesser than the primary voltage is called-

A) Step-up transformer

B) Step-down transformer

C) Constant current transformer

D) None of the options

Answer Key: B

Question No. 27

The ratio of output power to the input power for a transformer is termed as its-

- A) Efficiency
- B) Coefficient
- C) Reliability
- D) Coupling

Answer Key: A

Question No. 28

The capacitors are named according to the-

- A) Size of the capacitor
- B) Dielectric material used
- C) Material used for the plates
- D) Working voltage

Answer Key: B

Question No. 29

In a pure capacitive circuit, current leads the voltage by-

- A) 30°
- B) 60°
- C) 90°
- D) 120°

Answer Key: C

Question No. 30

The power consumption of an ideal capacitor-

- A) Is zero
- B) Increases with frequency
- C) Increases with capacitance
- D) Is Infinite

Answer Key: A

Question No. 31

In a series RC circuit-

- A) Voltage leads the current
- B) Current leads the voltage
- C) Voltage remains in-phase with the current
- D) Voltage becomes 180° out-of-phase with the current

Answer Key: B

Question No. 32

Resonance circuits are used in-

- A) Amplifiers only
- B) Oscillators only
- C) Amplifiers and oscillators
- D) Rectifiers

Answer Key: C

Question No. 33

An instrument which indicates the total electrical quantity up to the time of measurement is called a/an-

- A) Recording instrument
- B) Indicating instrument
- C) Integrating instrument
- D) Absolute instrument

Answer Key: C

Question No. 34

A Moving Iron type meter can be used to measure-

- A) DC only
- B) AC only
- C) Both DC and AC
- D) AC as well DC with the help of a rectifier

Answer Key: C

Question No. 35

Device used to locate open-circuit or short-circuit is called-

- A) Ammeter
- B) Voltmeter
- C) Ohmmeter
- D) Wattmeter

Answer Key: C

Question No. 36

Low resistance value can be measured accurately by using a/an-

- A) Ohmmeter
- B) Multimeter
- C) Megger
- D) None of the options

Answer Key: D

Question No. 37

Which of the following LED emits an invisible light?

- A) Laser LED
- B) Infrared LED
- C) Bicolour LED
- D) Tricolour LED

Answer Key: B

Question No. 38

Transistor biasing means-

- A) Applying AC signals to the transistor
- B) Applying voltage to the terminals of a transistor
- C) Applying correct DC voltages with the requisite polarity at the terminals of a transistor for ensuring its working
- D) Ensuring a maximum output from the transistor

Answer Key: C

Question No. 39

The current gain of a CB amplifier is-

- A) About 100
- B) Equal to 1
- C) Less than 1
- D) More than 1

Answer Key: C

Question No. 40

The input impedance of a CB amplifier is-

A) Medium

B) Very Low

C) High

D) Very high

Answer Key: B

Question No. 41

How many diodes are employed in a three-phase full wave rectifier?

A) 3

B) 6

C) 9

D) 12

Answer Key: B

Question No. 42

A UPS means-

A) Under Power System

B) Upper Power System

C) Uninterruptible Power Supply

D) Unique Power Supply

Answer Key: C

Question No. 43

The gain of a filter circuit is expressed in terms of-

A) Amperes

B) Decibels

C) Volts

D) Watts

Answer Key: B

Question No. 44

A filter circuit that allows signals above a particular frequency to pass through it is called a-

A) Low pass filter

B) High pass filter

C) Band pass filter

D) Band stop filter

Answer Key: B

Question No. 45

The filter circuit which attenuates or rejects a specific band of frequencies is called a-

A) Band pass filter

B) Band stop filter

C) High pass filter

D) Low pass filter

Answer Key: B

Question No. 46

The amplifier that retains the shape of the input signal at the output is called a-

A) Pulse amplifier

B) Linear amplifier

C) Non-linear amplifier

D) None of the options

Answer Key: B

Question No. 47

Small signal amplifiers are also known as-

- A) Large power amplifiers
- B) Medium power amplifiers
- C) Voltage amplifiers
- D) Both Large and medium power amplifiers

Answer Key: C

Question No. 48

Which of the following components fails most frequently in amplifiers?

- A) Resistor
- B) Transistor
- C) Electrolytic capacitor
- D) Ceramic capacitor

Answer Key: C

Question No. 49

Which of the following is NOT an advantage of negative feedback?

- A) Reduced noise
- B) Reduced distortion
- C) Increased gain
- D) Increased sound quality

Answer Key: C

Question No. 50

One gram is equal to _____ milligrams.

- A) 100
- B) 1000
- C) 10
- D) 5

Answer Key: B

Question No. 51

An operational amplifier is designed to amplify-

- A) AC signals only
- B) DC signals only
- C) Both AC and DC signals
- D) Pulse signals only

Answer Key: C

Question No. 52

A Colpitt's oscillator employs-

- A) Resistive feedback
- B) Capacitive feedback
- C) Negative feedback
- D) Stray capacitance feedback

Answer Key: B

Question No. 53

An astable multivibrator has-

- A) No stable state
- B) One stable state
- C) Two stable states
- D) Either one or two stable states

Answer Key: A

Question No. 54

Receivers require a/an _____ diode for the detection of AM waves.

- A) Zener
- B) Rectifier
- C) Power
- D) Tunnel

Answer Key: B

Question No. 55

Which type of colour transmission system is used in India?

- A) SECAM
- B) NTSC
- C) HDTV
- D) PAL

Answer Key: D

Question No. 56

The waveform used in CRO for deflecting the beam from left to right is-

- A) Sawtooth
- B) Square
- C) Rectangular
- D) Triangular

Answer Key: A

Question No. 57

A dual beam oscilloscope consists of-

- A) Two electron guns
- B) Two independent CRTs
- C) Single beam splitted into two beams
- D) None of the options

Answer Key: A

Question No. 58

Lissajous figures are used in the measurement of-

- A) Current
- B) Voltage
- C) Frequency
- D) Power (V X I)

Answer Key: C

Question No. 59

Radar system is operated in the frequency range of-

- A) HF
- B) VHF
- C) UHF
- D) UHF and Microwave

Answer Key: D

Question No. 60

The correct quantity of solder used for a solder joint is indicated by-

- A) Concave fillets
- B) Convex fillets
- C) Pits and voids
- D) Stepped fillets

C) Henry

D) Hertz

Answer Key: C

Question No. 68

Efficiency of a transformer is the ratio of-

A) Output power to input power

B) Input power to output power

C) Input current to output current

D) Output current to input current

Answer Key: A

Question No. 69

Voltage regulation of an ideal transformer is-

A) 1

B) ∞

C) 100

D) 0

Answer Key: D

Question No. 70

The circuit used to get a purer DC output from a rectifier is known as-

A) Converter

B) Commutator

C) Inverter

D) Ripple filter

Answer Key: D

Question No. 71

Which is the Most Significant Bit (MSB) of the binary number 10100 ?

A) 101

B) 10

C) 0

D) 1

Answer Key: D

Question No. 72

The chemical used for removing copper from copper clad boards is called-

A) Thinner

B) Remover

C) Eraser

D) Etchant

Answer Key: D

Question No. 73

The amplifier works as an oscillator when the loop gain becomes-

A) +1

B) -1

C) 0

D) ∞

Answer Key: A

Question No. 74

The other name for the common collector amplifier is-

- A) Base follower
- C) Emitter follower

- B) Collector follower
- D) Impedance follower

Answer Key: C

Question No. 75

The total current gain of a darlington pair is equal to-

- A) β_1 / β_2
- B) β_2 / β_1
- C) $\beta_1 * \beta_2$
- D) $\beta_1 + \beta_2$

Answer Key: C