

Wireman – Semester 1 Module 1: Safety practice and Hand tools

Reviewed and updated on: 01st November 2019 Version 1.1

1 : What is the expansion of ABC in first aid treatment?

- A** : Airway Bleeding Circulation
- B** : Airway Breathing Circulation
- C** : Airway Breathing Carefulness
- D** : Accident Breathing Carefulness

2 : Which is the colour code of warning signs?

- A** : White symbol on blue background
- B** : White symbol on green background
- C** : Red border and cross bar, black symbol on white
- D** : Yellow background with black border and symbol

3 : Which category of basic sign refers to avoid naked flame?

- A** : Warning signs
- B** : Mandatory signs
- C** : Information signs
- D** : Prohibition signs

4 : Which category, the fire due to gas and liquified gas comes under?

- A** : Class C fire
- B** : Class A fire
- C** : Class D fire
- D** : Class B fire

5 : What are the factors that must be present in combination of fire?

- A** : Fuel, heat and hydrogen
- B** : Fuel, temperature, hydrogen
- C** : Fuel, hydrogen, oxygen
- D** : Fuel, heat and oxygen

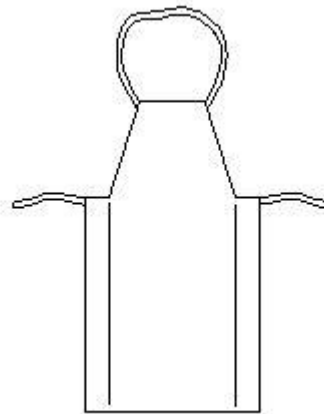
6 : What is smothering in extinguishing of fire?

- A** : Adding the fuel from fire
- B** : Removing the fuel from fire
- C** : Isolating the heat from fire
- D** : Isolating the supply of oxygen from fire

7 : Which type of fire extinguisher is used for fire on electrical equipment?

- A** : Foam extinguisher
- B** : Water filled extinguisher
- C** : Stored pressure type extinguisher
- D** : Halon extinguisher

8 : What is the name of PPE?



- A** : Apron
- B** : Leg guards
- C** : Face shield
- D** : Hand screen

9 : What is the meaning of safety?

- A** : The occupational hazards
- B** : Provide safe work environment
- C** : Giving first aid treatment to the victim
- D** : The freedom (or) protection from harm, danger etc..

10 : Which Personal Protective Equipment (PPE) is used for eye protection?

- A** : Helmet
- B** : Goggles
- C** : Nose mask
- D** : Leather aprons

11 : Which purpose leather aprons are used as personal protective equipment?

- A** : Ear protection
- B** : Eye protection
- C** : Body protection
- D** : Face protection

12 : Which concept of 5s indicates standardization?

- A** : Step - 1
- B** : Step - 2
- C** : Step - 3
- D** : Step - 4

13 : Which waste is used as a fuel for the Bio-gas power plant?

- A** : Chemical waste
- B** : Agricultural waste

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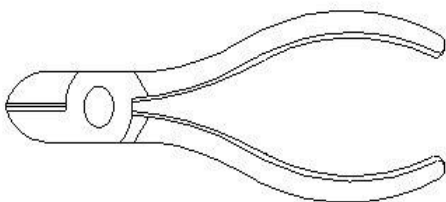
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- C** : Waste produced from the water source
D : Waste produced by the men and animal
-

14 : What is cleaning?

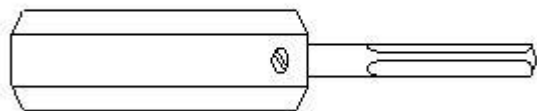
- A** : Preventing the additional matter
B : Removing unwanted matter from the environment
C : Keeping the things in systematic arrangement
D : Keeping the working place in safe situation
-

15 : What is the name of the tool?



- A** : Combination plier
B : Wire stripper
C : Crimping tool
D : Side cutter
-

16 : What is the name of the tool?



- A** : Poker

- B** : Gimlet
C : Bradawl
D : Raw plug tool
-

17 : Which screwdriver is used for driving star headed screw?

- A** : Connector screwdriver
B : Philips screw driver
C : Heavy-duty screwdriver
D : Insulated screw driver
-

18 : In which type of hazard virus will belong?

- A** : Ergonomic
B : Biological hazard
C : Physiological hazard
D : Phychological hazard
-

19 : Which one is the example for chemical hazard?

- A** : Fatigue
B : Bacteria
C : Corrosive
D : Sickness
-

20 : What is the goal of the occupational health safety?

- A** : To maintain discipline
B : To co-operate with co-workers
C : To provide a safe work environment
D : To keep the work place neat and clean
-

Wireman – Semester 1 Module 2: Wiring Joints and Soldering

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21 : Which is called valance electron in an atom?

- A : Half the total No of electron
- B : No: of electron in middle orbit
- C : No: of electron in inner most orbit
- D : No: of electron in the outer most orbit

22 : How many electrons are in a copper atom?

- A : 27
- B : 28
- C : 29
- D : 30

23 : How many number of electrons will move in one second for one ampere current through the conductor?

- A : 6.24×10^{15}
- B : 6.24×10^{16}
- C : 6.24×10^{17}
- D : 6.24×10^{18}

24 : What is the property of direct current?

- A : Magnitude and direction of current changes with time
- B : Magnitude and direction of current remains constant
- C : Direction of current changes with time
- D : Magnitude of current changes with time

25 : Which effect is produced, if the current is passed through a conductor?

- A : Thermal effect
- B : Magnetic effect
- C : Chemical effect
- D : Electrostatic effect

26 : Which effect is produced, if the current in passed through a coil?

- A : Heating effect
- B : Chemical effect
- C : Magnetic effect
- D : Ionisation effect

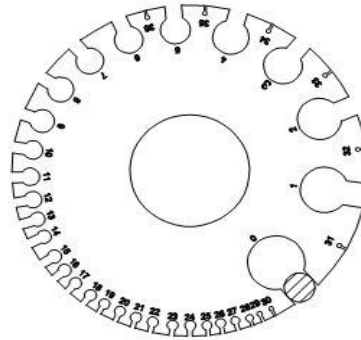
27 : Which effect of electric current is used for the treatment of mental patient?

- A : Shock effect
- B : Chemical effect
- C : Magnetic effect
- D : Ionization effect

28 : What is the name of the effect, if the current is passed through the electrolyte?

- A : Heating
- B : Chemical
- C : Magnetic
- D : Thermal

29 : What is the name of the measuring tool?



- A : Outside micrometer
- B : Inside micrometer
- C : Vernier caliper
- D : Standard wire gauge

30 : What is the expansion of SWG?

- A : standard wire gauge
- B : stranded wire gauge
- C : standard wire grade
- D : standard wire group

31 : Which conductors are used for O.H distribution lines?

- A : Insulated conductors
- B : Insulated solid conductors
- C : Bare conductors
- D : Two core cable

32 : What does 7 indicates in 7/20 cable?

- A : Insulation grade
- B : Diameter in mm
- C : No of conductor
- D : Size of conductor in gauge

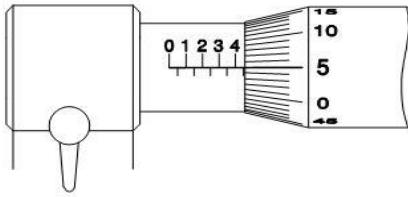
33 : Which insulating material is used for insulation tapes?

- A : Mica
- B : Fibre
- C : Plastic
- D : Leathroid

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34 : What is the reading of the micrometer?

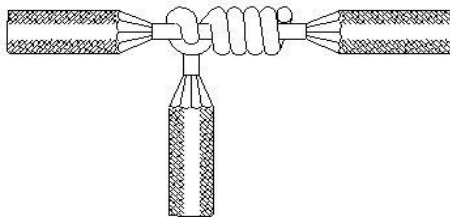


- A : 4.05 mm
- B : 4.15 mm
- C : 4.50 mm
- D : 4.55 mm

35 : What is the purpose of additional covering over the insulation of insulated conductor?

- A : To increase dielectric strength
- B : To add more mechanical strength
- C : To increase the current carrying capacity
- D : To protect the wire

36 : What is the name of the wire joint?

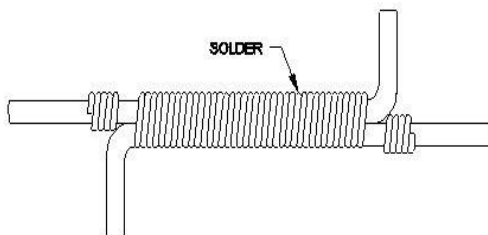


- A : Aerial tap joint
- B : T joint
- C : Knotted tap joint
- D : Plain tap joint

37 : Which joint is suitable for low current circuits only?

- A : Double cross tap joint
- B : Western union joint
- C : Scarfed joint
- D : Aerial tap joint

38 : What is the name of the wire joint?



- A : Britannia 'T' joint
- B : Western union joint

- C : Britannia straight joint
- D : Married joint

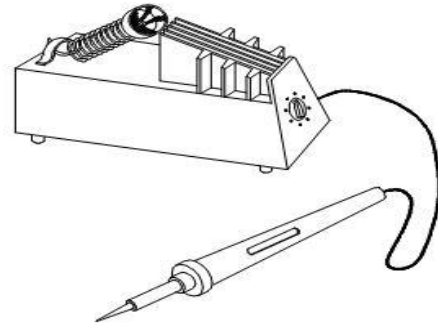
39 : Which type of tap joint is suitable for more tensile stress?

- A : Plain tap joint
- B : Aerial tap joint
- C : Knotted tap joint
- D : Duplex cross joint

40 : Which type of joint is used in overhead lines for extending the length of wire?

- A : Scarfed joint
- B : BritanniaT joint
- C : Western union joint
- D : Married joint

41 : What is the name of the soldering?



- A : DIP soldering
- B : Temperature controlled soldering
- C : Soldering with soldering gun
- D : Soldering with blow lamp

42 : Which metal is used to make soldering iron bit?

- A : Iron
- B : Steel
- C : Brass
- D : Copper

43 : Which soldering method is used to solder under ground cable joints?

- A : Dip soldering
- B : Soldering iron method
- C : Pot and ladle method
- D : Machine soldering method

44 : Which solder is used for soldering aluminium conductor?

- A : Fine solder
- B : Resin core solder

Wireman – Semester 1 Module 2: Wiring Joints and Soldering

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- C** : Alcap solder
D : Tinman solder

45 : Which soldering flux used for soldering electrical joints?

- A** : Rosin
B : Zinc chloride
C : Sal ammonia rosin
D : Diluted chloric acid

46 : Which metal is soldered by using zinc chloride flux as solder?

- A** : Zinc
B : Bronze
C : Gun metal
D : Galvanised iron

47 : Which is to be added to recondition the solder?

- A** : Tin
B : Zinc
C : Lead
D : Rosine

48 : Which colour band of resistor indicates the multiplier?

- A** : First band
B : Third band
C : Fourth band
D : Second band

49 : Which resistor is known as photo-Conductors?

- A** : Light dependent resistor
B : Voltage dependent resistors
C : PTC resistors
D : NTC resistors

50 : Which material is used for making wire wound resistors?

- A** : Manganin
B : Graphite
C : Tantalum
D : Carbon

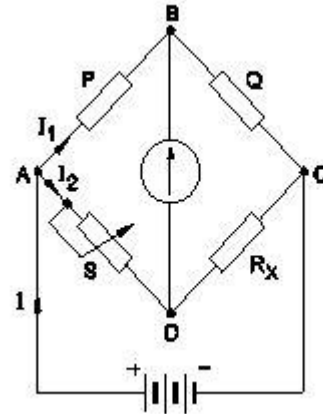
51 : Which is the example for metal film resistor?

- A** : Carbon
B : Eureka
C : Maganin
D : Michrome

52 : What is the reading of galvanometer in whetstone bridge at balanced stage?

- A** : High deflection
B : Low deflection
C : Null deflection
D : Vibrates

53 : Which formula is used to calculate the value of unknown resistance (R_x) in Wheatstone bridge?



A :

$$R_x = \frac{P}{Q} \times S$$

B :

$$R_x = \frac{S}{P} \times Q$$

C :

$$R_x = \frac{P}{S} \times Q$$

D :

$$R_x = \frac{P}{2} \times \frac{Q}{S}$$

54 : What is the condition, if zero current is flowing through the galvanometer in Wheatstone bridge?

- A** : Balanced
B : Unbalanced
C : Short-circuited
D : Open circuited

55 : Calculates the value of unknown resistance (R) is connected in a wheat stone bridge at balanced conditions, if $P = 350\Omega$, $S = 200\Omega$ and $Q = 420\Omega$?

Wireman – Semester 1 Module 2: Wiring Joints and Soldering

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- A : 480Ω
- B : 320Ω
- C : 280Ω
- D : 240Ω



Wireman – Semester 1 Module 3: Basic Electrical Practice

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56 : Which is conductor?

- A : Wood
- B : Zinc
- C : Rubber
- D : Mica

57 : What is the property of good conductor?

- A : Must have low specific resistance
- B : Must have high dielectric strength
- C : Must have low tensile strength
- D : Must have low melting point

58 : What is the advantage of stranded conductor compared to solid conductor?

- A : More rigidity
- B : Flexibility
- C : High melting point
- D : High mechanical strength

59 : What is the main property of an insulator?

- A : Low resistance
- B : Low melting point
- C : High temperature co-efficient
- D : High dielectric strength

60 : What is the voltage grading range of high voltage?

- A : 0V - 250V
- B : 650V - 33000V
- C : Above 33000V
- D : 250V - 650V

61 : Which voltage grading 1100 volt belongs?

- A : Low Voltage (L.V)
- B : Medium Voltage (M.V)
- C : High Voltage (H.V)
- D : Extra High Voltage (E.H.V)

62 : What is the voltage grade range of medium voltage?

- A : 250V-415V
- B : 250-650V
- C : 1.1KV-11KV
- D : Above 33000V

63 : Which law states the relation between the voltage current and resistance in a closed circuit at constant temperature?

- A : Ohms law
- B : Kirchoffs current law
- C : Kirchoffs voltage law
- D : Laws of resistance

64 : Which electrical quantity is inversely proportional to the current as per ohms law?

- A : Resistance
- B : Voltage
- C : Power
- D : Energy

65 : Which bulb will have lowest resistance?

- A : 240V, 60W
- B : 240V, 100W
- C : 240V, 200W
- D : 240V, 500W

66 : Calculate the value of resistance connected to the supply voltage of 100V and current through 4 A?

- A : 0.4 ohm
- B : 0.04 ohm
- C : 25 ohm
- D : 400 ohm

67 : What is the S.I unit of specific resistance?

- A : Ohm/cm
- B : Ohm/metre²
- C : Ohm-metre
- D : Micro ohm/cm²

68 : What is the specific resistance value of copper conductor?

- A : 1.72 micro ohm/cm²
- B : 1.72 micro ohm
- C : 1.72 ohm /cm²
- D : 1.72 micro ohmmeter

69 : What is the effect in resistance of the conductor, if its diameter is doubled?

- A : Increase to two times
- B : Increase to four times
- C : Decrease to half the value
- D : Decrease to ¼ th value

70 : Which is directly proportional to the resistance?

- A : Area of cross section
- B : Length
- C : Resistivity
- D : Temperature

71 : What is the total resistance (RT) if R1, R2, R3 are connected in series?

Wireman – Semester 1 Module 3: Basic Electrical Practice

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A :
 $R_T = R_1 + R_2 + R_3$

B :
 $R_T = \frac{1}{\frac{1}{R_1} + \frac{1}{R_2} + \frac{1}{R_3}}$

C :
 $R_T = R_1 R_2 R_3$

D :
 $R_T = \frac{1}{R_1 + R_2 + R_3}$

72 : What is formula to calculate electric power (P)?

A : $P = I^2 \times R$

B : $P = R/V^2$

C : $P = IR$

D : $P = I/V$

73 : What is the change in total resistance value, if additional resistor is connected in a parallel circuit?

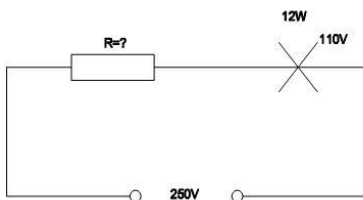
A : Decrease

B : Remains same

C : Increase 2 times

D : Increase to 1.5 times

74 : Calculate the value of series resistor?



A : 1380Ω

B : 1390Ω

C : 1400Ω

D : 1492Ω

75 : Which law states that in each closed circuit the sum of all voltage drops are equal to zero?

A : Krichoffs current Law

B : Krichoffs voltage Law

C : Law of Resistance

D : Ohm's law

76 : Which law is used to determine the equivalent resistance of the network and the current?

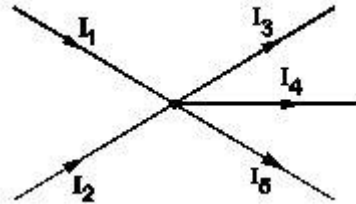
A : Ohm's law

B : Krichoffs Law

C : Laws of Resistance

D : Lenz's law

77 : Which is the correct equation based on Kirchhoff's first law?



A : $I_1 + I_3 = I_2 + I_4 + I_5$

B : $I_1 + I_2 + I_3 = I_4 + I_5$

C : $I_1 + I_2 = I_3 + I_4 + I_5$

D : $I_1 + I_2 = I_3 + I_4 + I_5 = 0$

78 : Which is the simplest method used to measure low resistance?

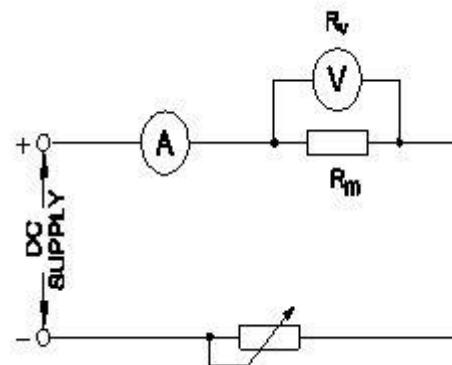
A : Voltmeter ammeter method

B : Slide wire, bridge method

C : Post office base method

D : Kelvin bridge method

79 : What is the value of voltmeter resistance (Rv) compared to resistance (Rm) to be measured?



A : Equal

B : Low

C : Very low

D : Very large

80 : Which defines that the changes in resistance in ohm per 1°C rise in temperature?

A : Thermal expansion

B : Thermal conductivity

C : Temperature coefficient

D : Thermo dynamics

Wireman – Semester 1 Module 3: Basic Electrical Practice

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81 : Which material have negative temperature coefficient?

- A** : Carbon
 - B** : Tungsten
 - C** : Nichrome
 - D** : Mangnin
-

82 : Which resistor has negative temperature co-efficient?

- A** : Sensistor
 - B** : Thermistor
 - C** : Varistor
 - D** : LDR resistor
-

Wireman – Semester 1 Module 4: Basic Wiring Practice

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- 83** : Which switch is having four terminals?
A : Single pole one way switch
B : single pole two way switches
C : Intermediate switch
D : Pull switch

-
- 84** : Which type of holder is used between 200W to 300W lamp?
A : Edison screw holder
B : Goliath screw holder
C : Bracket holder
D : Angle holder

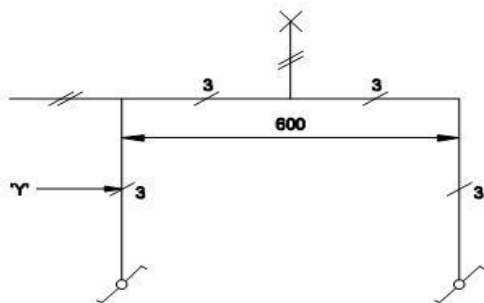
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- 85** : Which switch is having a spring-loaded button?
A : Intermediate switch
B : Push button switch
C : Pull switch
D : Double pole switch

-
- 86** : What is the name of BIS symbol?



- A** : Lamp
B : Two way switch
C : Intermediate switch
D : Multi - position switch

-
- 87** : What does the symbol marked as Y indicates?



- A** : Number of switches to be connected
B : Number of wires run on the limb
C : Number clamps (or) clips to be fixed
D : Number of the battern (or) pipe to be fixed

- 88** : Which supply voltage the fire alarm circuit works?
A : 240V AC
B : 220V DC
C : 110V DC
D : 24V DC

-
- 89** : Which is used to sense the heat in fire alarm circuit?
A : Varistors
B : Light dependent resistor
C : Sensistors
D : Thermistors

-
- 90** : What is the voltage range of DC series MCB?
A : 110 volt DC
B : 200 volt DC
C : 220 volt DC
D : 230 volt DC

-
- 91** : Which MCBs are designated to protect circuit with inductive loads?
A : L series MCBs
B : G series MCBs
C : DC series MCBs
D : L series and DC series MCBs

-
- 92** : Which classification of accessories, ceiling rose belongs?
A : Outlet accessories
B : Safety accessories
C : Holding accessories
D : General accessories

-
- 93** : Which type of accessories, the fuse comes under?
A : Controlling accessories
B : Holding accessories
C : Safety accessories
D : Outlet accessories

-
- 94** : Which is the purpose of iron clad fuse cut outs used in domestic service connection?
A : To protect the line from over voltage
B : To ensure the line is not loaded beyond rated current
C : To protect the service line from short circuit
D : To protect the inmates from shock

-
- 95** : What is the height the switch shall be forced above the floor level as per NEC?

Wireman – Semester 1 Module 4: Basic Wiring Practice

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- A : 1.3 m
 - B : 1.5 m
 - C : 2.0 m
 - D : 2.5 m
-

96 : Which is the vertical clearance of low and medium voltage lines from buildings as per IE rules?

- A : 1.2 m
- B : 2.5 m
- C : 5.8 m
- D : 6.1 m

97 : Which is the value of insulation resistance permissible as per IE rules?

- A : Not more than 1 M ohm
 - B : Not more than 2 M ohm
 - C : Not more than 3 M ohm
 - D : Not more than 4 M ohm
-

Wireman – Semester 1 Module 5: Cells and Batteries

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98 : Which is the formula to express Faradays law of electrolysis?

A :

$$M = \frac{Z}{It}$$

B :

$$M = Zit$$

C :

$$M = \frac{it}{Z}$$

D :

$$M = \frac{Zt}{i}$$

99 : What is the process of chemical decomposition produced by current passed through electrolyte?

A : Electromagnetism

B : Electrolysis

C : Electrodynamism

D : Electro statics

100 : Which is the positive (Anode) electrode in silver oxide cells?

A : zinc

B : copper

C : carbon

D : Silver oxide

101 : Which is rechargeable cell?

A : Voltaic cell

B : Carbon zinc cell

C : Lead acid cell

D : Mercury cell

102 : Which material is used as positive electrode in a dry cell?

A : Zinc

B : Carbon

C : Copper

D : Lithium

103 : Which is the negative electrode in voltaic cell?

A : Carbon

B : Copper

C : Zinc

D : Lithium

104 : Which electrolyte is used in lead acid battery?

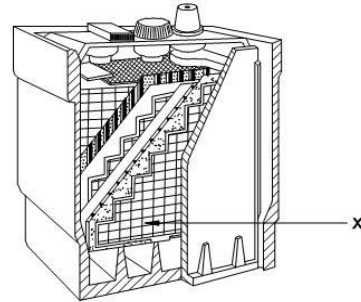
A : Diluted hydrochloric acid

B : Concentrated ammonium chloride

C : Concentrated potassium hydroxide

D : Diluted sulphuric acid

105 : What is the name of part marked as x?



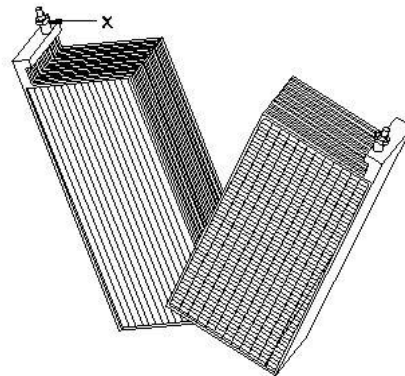
A : Container

B : Plates

C : Separators

D : Terminals

106 : What is the name of the part marked as 'x' of lead acid battery?



A : Separators

B : Container

C : Post terminal

D : Plates

107 : What is the purpose of separators provided in lead acid battery?

A : To avoid short between positive and negative plates

B : To avoid short between plates and body

C : To avoid buckling effect

D : To avoid sedimentation effect

108 : Which material the positive Faure plates are made in lead acid battery?

A : Spongy lead (Pb)

Wireman – Semester 1 Module 5: Cells and Batteries

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- B** : Lead peroxide (PbO₂)
C : Lead sulphate (PbSO₄)
D : Zinc sulphate (ZnSO₄)

109 : Which formula is used to calculate internal resistance (R_i) of a cell?

A :

$$R_i = \frac{I_L}{E - V}$$

B :

$$R_i = \frac{I_L}{V - E}$$

C :

$$R_i = \frac{V - E}{I_L}$$

D :

$$R_i = \frac{E - V}{I_L}$$

110 : Why cells are connected in series?

- A** : To reduce total voltage
B : To obtain higher current
C : To obtain higher voltage
D : To reduce current

111 : What is the name of the charge that given to a battery if it is in danger of becoming over discharged during working?

- A** : Boost charge
B : Freshening charge
C : Trickle charge
D : Initial charge

112 : Which method is used to charge the battery at very low rate and long period?

- A** : Rectifier method
B : Trickle charging method
C : Constant current method
D : Constant potential method

113 : Which instrument is used to measure electrolyte specific gravity?

- A** : Barometer
B : Hydrometer
C : Lactometer
D : Thermometer

114 : Why the vent plugs are kept open during charging of lead acid battery?

- A** : Check the level of electrolyte
B : Release the gas produced
C : Enter the oxygen from atmospheric air
D : Check the condition of plates

115 : Which is applied on the battery terminals to avoid corrosion?

- A** : Solid grease
B : Petroleum jelly
C : Lubricating oil
D : Liquid grease

116 : What happens to the terminal voltage of a cell if load is increased?

- A** : Decreases
B : Increases
C : Remain same
D : Falls to zero

117 : Which is the purpose of inverter?

- A** : Convert AC to DC
B : Convert low voltage DC to high voltage DC
C : Convert low voltage AC to high voltage AC
D : Convert DC to AC

118 : Which device converts AC to DC in inverter?

- A** : SCR
B : Metal rectifiers
C : Bridge rectifiers
D : Full wave rectifiers

119 : What is the full form of abbreviation of UPS?

- A** : Uni directional Power Supply
B : Un interrupted Power Supply
C : Uniform Power Supply
D : Un regulated Power Supply

120 : Which is used as stand by source for critical loads in absence of AC supply?

- A** : Inverter
B : UPS
C : Voltage Stabilizer
D : Regulated Power Supply

121 : Which converts light energy into electrical energy?

- A** : Thermistors
B : Sensistors
C : Photovoltaic cell
D : Light dependent resistor

Wireman – Semester 1 Module 5: Cells and Batteries

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122 : Which batteries can be kept in the AC room along with inverter?

- A** : Nickel cadmium batteries
 - B** : SMF batteries
 - C** : Tubular batteries
 - D** : Nickel iron batteries
-

123 : Which is the unit of capacity of a storage cell?

- A** : Ampere-hour (A)
 - B** : Watt
 - C** : Volt Ampere (VA)
 - D** : Ampere
-

124 : Which factor the capacity of a cell depends?

- A** : Distance between plates
 - B** : Material of positive plate
 - C** : Material of negative plate
 - D** : Size of plates
-

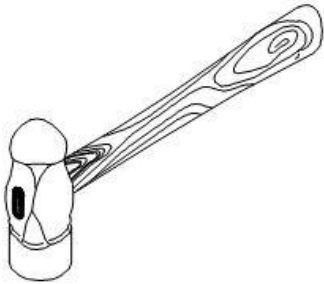
125 : Which cell has high shelf life?

- A** : Dry cell
 - B** : Leclanche cell
 - C** : Lithium cell
 - D** : Alkaline cell
-

Wireman – Semester 1 Module 6: Basic Workshop Practice

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126 : What is the name of the hammer?



- A : Claw hammer
- B : Straight pein hammer
- C : Ball pein hammer
- D : Cross pein hammer

127 : What is the size of firmer chisel?

- A : 1 mm to 30 mm
- B : 2 mm to 40 mm
- C : 3 mm to 50 mm
- D : 4 mm to 60 mm

128 : How files are specified?

- A : By length
- B : By thickness
- C : By width
- D : By total length with handle

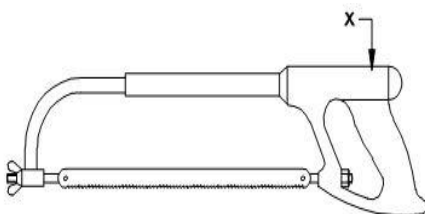
129 : What is the use of cross cut chisel?

- A : Cutting keyways
- B : Cutting curved grooves
- C : Squaring materials at corners
- D : Removing metal after chain drilling

130 : What purpose rough file is used?

- A : High degree finishing
- B : Good finishing purpose
- C : Removing less metal and good finish
- D : Removing more quantity of metal quickly

131 : What is the name of hacksaw frame part marked as X?

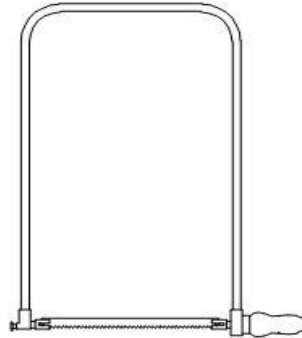


- A : Handle
- B : Frame
- C : Fixed blade holder
- D : Frame length adjustment

132 : How hacksaw blades are specified?

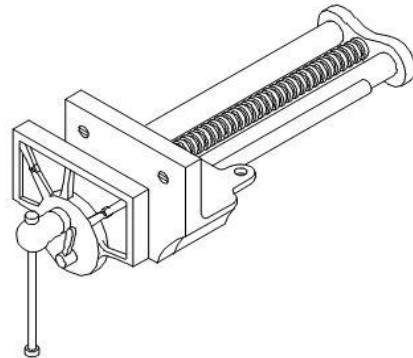
- A : Teeth per 10mm
- B : Teeth per 15mm
- C : Teeth per 20mm
- D : Teeth per 25mm

133 : What is the use of fret saw?



- A : Larger curve cutting
- B : Cutting sharp corners
- C : Internal cutting
- D : Cutting sharp and fine curves

134 : What is the name of the tool?



- A : 'G clamp
- B : Vice clamp
- C : Bench hook
- D : Carpenters vice

135 : What is the accuracy of the wooden folding rule?

- A : 0.05 mm
- B : 0.25 mm
- C : 0.5 mm
- D : 1 mm

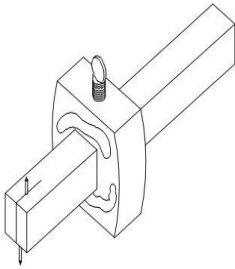
136 : How nails are specified?

- A : By length only
- B : By type only
- C : By length and type only
- D : By length type and gauge number

Wireman – Semester 1 Module 6: Basic Workshop Practice

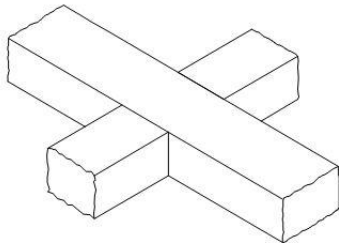
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137 : What is the use of the carpenter tool?



- A : Marking lines parallel to face
- B : Marking holes on wood
- C : Check the thickness of wood
- D : Check the squareness of wood

138 : Which is the name of wooden joint?

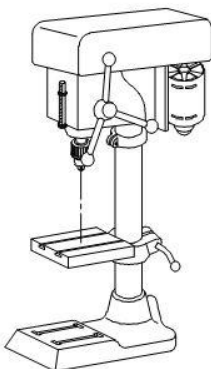


- A : End lap joint
- B : Middle lap joint
- C : Cross lap joint
- D : Corner joint

139 : Which defect in timber is caused by the growth of branches?

- A : Twisting
- B : Cracking
- C : Cupping
- D : Knot

140 : What is the name of the drilling machine?



- A : Pillar drilling machine
- B : Radial drilling machine
- C : Electric hand drilling machine
- D : Sensitive bench drilling machine

141 : Which formula is used to calculate cutting speed (CS) of a drill bit of d = dia of drill, N = spindle speed in RPM?

A :

$$CS = \frac{N\pi d}{100} \text{ m/min}$$

B :

$$CS = \frac{N\pi d}{1000} \text{ m/min}$$

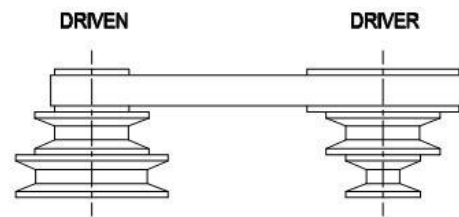
C :

$$CS = \frac{N\pi r}{1000} \text{ m/min}$$

D :

$$CS = \frac{N\pi d}{1000 \times 2} \text{ m/min}$$

142 : Which speed can be achieved by the belt arrangement in bench drilling machine?



- A : 2 times below than rated speed
- B : 3 times below than rated speed
- C : Rated speed
- D : Above rated speed

143 : What is the name of the operation needed to enable the head of the screw to fit flush with the surface of a component?

- A : Drilling
- B : Tapping
- C : Reaming
- D : Counter sinking

144 : What is the indication of the letter 'M' in thread formation M12?

- A : BSF thread
- B : BSW thread
- C : ISO inch thread
- D : ISO metric thread

145 : What is the thread angle of British standard worth (BSW) thread?

Wireman – Semester 1 Module 6: Basic Workshop Practice

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- A : 60°
- B : 65°
- C : 55°
- D : 50°

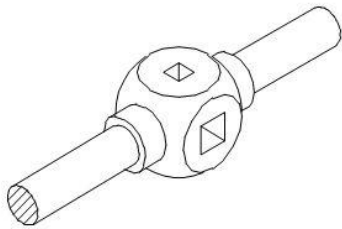
146 : How many types of threaded fastening available in ISO inch (unified) thread?

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

147 : What is the use of stock and die sets?

- A : To make internal threads in cylindrical jobs
- B : To make external threads in cylindrical jobs
- C : To make internal threads in square jobs
- D : To make external threads in square jobs

148 : Which is the name of wrench?

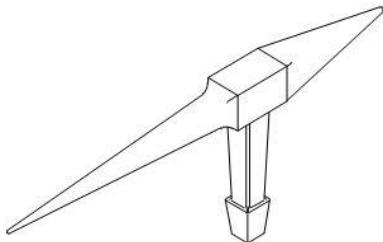


- A : T-handle tap wrench
- B : Double-ended non-adjustable tap wrench
- C : Solid tap wrench
- D : Double ended adjustable tap wrench

149 : What is the effect on thread is the side screw in more tightened?

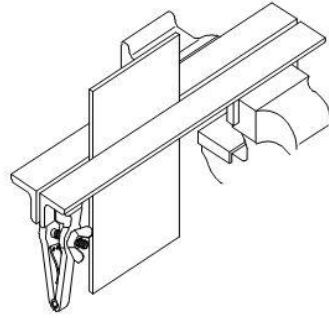
- A : No effect threads form normally
- B : Threads forms unevenly
- C : Both die and threads damaged
- D : Pipe broken into pieces

150 : What is the name of the stake?



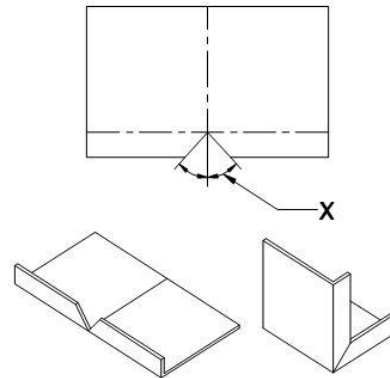
- A : Square stake
- B : Hatchet stake
- C : Blow-horn stake
- D : Bevel-edge square stake

151 : What is the name of the tool?



- A : Stakes
- B : "C" clamps
- C : Folding bar
- D : Angle steel

152 : What is the cutting angle of "V" notch marked as X?



- A : 30° angle to the edge of the sheet
- B : 40° angle to the edge of the sheet
- C : 45° angle to the edge of the sheet
- D : 50° angle to the edge of the sheet

153 : What is the use of bent snips?

- A : To cut straight slot
- B : To cut internal holes
- C : To cut external curves
- D : To cut internal curves

154 : Which notch is used, if a single hem meets at right angles?

- A : 'V' notch
- B : Slant notch
- C : Square notch
- D : Straight notch

155 : Which type of notch is used for forming rectangular box?

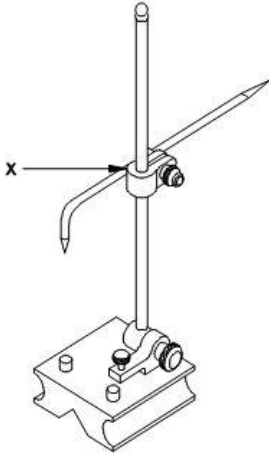
- A : 'V' notch
- B : Slant notch

Wireman – Semester 1 Module 6: Basic Workshop Practice

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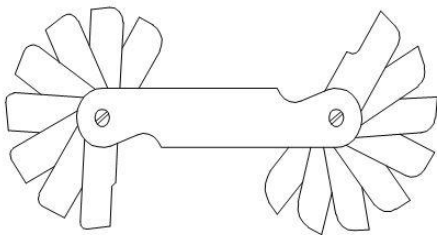
- C : Square notch
D : Straight notch

156 : What is the name of the part marked as X in an universal surface gauge?



- A : Snug
B : Scriber
C : Spindle
D : Clamping Nut

157 : What is the name of the gauge?



- A : Limit gauge
B : Radius gauge
C : Thread ring gauge
D : Standard wire gauge

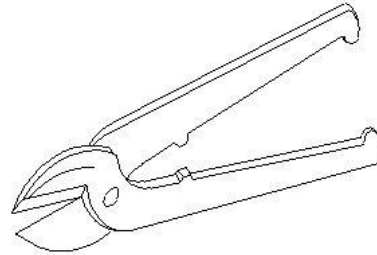
158 : How to check the radius of the parts by using radius gauge?

- A : Comparing with radius of the radius gauge
B : Actual measuring with the help of radius

gauge

- C : Calculated with the help of the radius gauge
D : Visually displayed in radius gauge

159 : What is the name of the tool?



- A : Bent snip
B : Straight snip
C : Side cutting plier
D : Diagonal cutting plier

160 : Which is called as plate?

- A : Sheets over 2 mm thick
B : Sheets over 3 mm thick
C : Sheets over 4 mm thick
D : Sheets over 5 mm thick

161 : Which type of stakes are used for riveting cone shape articles?

- A : Square stake
B : Hatchet stake
C : Bevel edge square stake
D : Blow horn stake

162 : Which makes the edge smooth and stiff in small sheet metal articles?

- A : Slant notch
B : Single hem
C : Double hem
D : Square notch
-

Wireman – Semester 1 Module 7: Magnetism and Capacitor

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163 : Which is dia magnetic substance?

- A : Iron and nickel
- B : Aluminium
- C : Graphite
- D : Copper

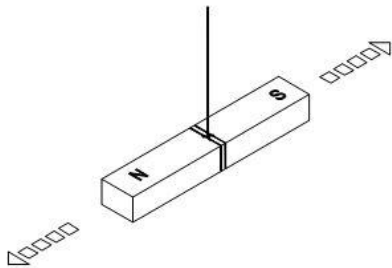
164 : What is the metal composition of Permalloy?

- A : Iron and nickel
- B : Iron and copper
- C : Iron and aluminium
- D : Iron and chromium

165 : What is the unit of permeability?

- A : Weber/metre
- B : No unit (mere number)
- C : Ampere turns/web
- D : Ampere turns/metre²

166 : Which property of a magnet is illustrated?



- A : Induction property
- B : Saturation property
- C : Directive property
- D : Poles-existing property

167 : Which factor depends on the permeability of the material?

- A : Length
- B : Flux density
- C : Field intensity
- D : Magneto motive force

168 : Which rule is used to find the direction of the self induced emf in a coil?

- A : Clock rule
- B : Lenz law
- C : Ampere rule
- D : Corkscrew rule

169 : Which rule is used for determine the direction of magnetic lines in a current carrying conductor?

- A : Lenz law
- B : Right hand palm rule

- C : Fleming left hand rule
- D : Fleming right hand rule

170 : Which rule is used to find the direction of the induced emf in a coil?

- A : Clock rule
- B : Lenz law
- C : Ampere rule
- D : Corkscrew rule

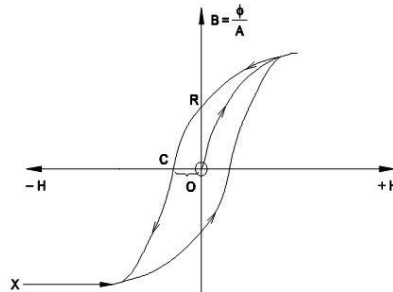
171 : Which rule is used to find the magnetic polarity of solenoid?

- A : Lenz law
- B : Right hand palm rule
- C : Fleming left hand rule
- D : Fleming right hand rule

172 : What is the purpose of corkscrew rule?

- A : To find direction induced emf
- B : To find direction of rotation of the conductor
- C : To find direction of the current flowing in the conductor
- D : To find direction of magnetic lines around the conductor

173 : What is the name of the part marked as X?



- A : Magnetic saturation
- B : Coercivity force
- C : Residual magnetism
- D : Origin point

174 : What is the name of property that the flux density always lagging behind the magnetising force?

- A : Hysteresis
- B : Magnetic intensity
- C : Magnetic induction
- D : Residual magnetism

175 : Which is determined by BH curve?

- A : The retentiveness of the material
- B : The field intensity of the substance

Wireman – Semester 1 Module 7: Magnetism and Capacitor

Reviewed and updated on: 01st November 2019 Version 1.1

- C** : The magnetic properties of the material
D : The pulling power of the magnetic material

176 : Which force is required to demagnetise the residual magnetism in the hysteresis loop?

- A** : Electromotive force
B : Magneto motive force
C : Counter induced emf
D : Coercive force

177 : Which is the example for inductor?

- A** : Choke
B : Transformer
C : Buzzer
D : Electric bell

178 : Which law states whenever the magnetic flux is linked with a circuit changes an emf is always induced it?

- A** : Faraday's law of electromagnetic induction
B : Lenz law
C : Fleming left hand rule
D : Corkscrew rule

179 : What is unit of inductance?

- A** : Weber
B : Henry
C : Ampere turns
D : wb/m²

180 : Which law is used to determine the induced emf in a conductor?

- A** : Fleming left hand rule
B : Fleming right hand rule
C : Lenz's law
D : Faraday's law of electromagnetic induction

181 : Which formula used to calculate the magnitude of induced emf?

A :

$$V = L \times \frac{di}{dt}$$

B :

$$V = L \times di \times dt$$

C :

$$V = L \times \frac{dt}{di}$$

D :

$$V = \left(\frac{dt}{di} \right) / L$$

182 : Which formula is used to find capacitance?

- A** : $C = QV$
B : $C = Q+V$
C : $C=V/Q$
D : $C=Q/V$

183 : What is the formula to calculate the total capacitance (C) if three capacitors (C1, C2, C3) connected in series?

A :

$$C = C1+C2+C3$$

B :

$$C = \frac{1}{C_1 + C_2 + C_3}$$

C :

$$\frac{C_1 C_2 C_3}{(C_1 C_2) + (C_2 C_3) + (C_3 C_1)}$$

D :

$$\frac{C_1 C_2 C_3}{C_1 + C_2 + C_3}$$

184 : Which factor is inversely proportional to the value of capacitance?

- A** : Dielectric strength
B : Thickness of the plate
C : Area of the plate
D : Distance between the plates

185 : Which type of capacitor is known as polarised capacitor?

- A** : Mica capacitor
B : Paper capacitor
C : Ceramic capacitor
D : Electrolytic capacitor

186 : Which material has high dielectric constant?

- A** : Air
B : Paper
C : Ceramic
D : Polyester

187 : What is the value of capacitance, if it stores 1 coulomb of charge at 1 volt?

- A** : 1 watts

Wireman – Semester 1 Module 7: Magnetism and Capacitor

Reviewed and updated on: 01st November 2019 Version 1.1

- B** : 1 ohm
 - C** : 1 farad
 - D** : 1 henry
-

188 : Which dielectric material is used in capacitor?

- A** : Empire cloth
 - B** : Milinex paper
 - C** : Ceramic
 - D** : Insulating varnish
-

189 : Where the variable air capacitors are used?

- A** : Radio receivers
 - B** : Oscillators
 - C** : Amplifiers
 - D** : RF filters
-

190 : Which type of capacitor is used for space requirements?

- A** : Plastic film type
 - B** : Ceramic disc type
 - C** : Electrolytic - Aluminium
 - D** : Electrolytic - Tantalum type
-

Wireman – Semester 1 Module 8: AC Circuits

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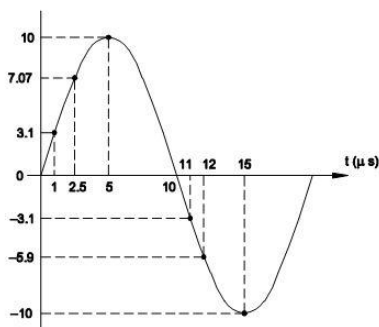
191 : What is the value of form factor?

- A : 1.23
- B : 1.11
- C : 0.81
- D : 0.707

192 : What is the RMS value of alternating voltage?

- A : $0.637 \times V_{av}$
- B : $0.707 \times V_{av}$
- C : $0.637 \times V_{max}$
- D : $0.707 \times V_{max}$

193 : What is the name of AC value is illustrated in dotted lines?



- A : Effective value
- B : Peak value
- C : Average value
- D : Instantaneous value

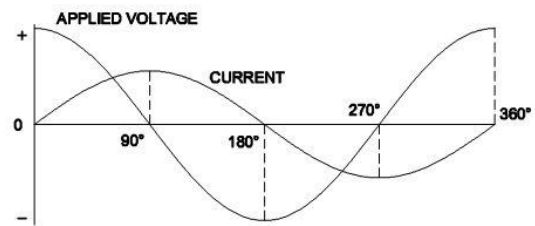
194 : Which quantity is rotating at a constant angular velocity?

- A : Scalar quantity
- B : Vector quantity
- C : Phasor quantity
- D : Algebraic quantity

195 : What is the shape of the waveform of A/C?

- A : Sine wave
- B : Square wave
- C : Sawtooth wave
- D : Pulsating wave

196 : Which AC circuit wave form is illustrated?



- A : Pure resistive circuit
- B : Pure inductive circuit
- C : Resistive and inductive circuit
- D : Inductance and capacitance circuit

197 : What is the inductive reactance of a coil having 20H inductance operating at 50 Hz supply frequency?

- A : 6252Ω
- B : 6273Ω
- C : 6284Ω
- D : 6382Ω

198 : Which formula is used to find impedance of a RLC series circuit?

- A : $Z = \sqrt{R^2 + (L+C)^2}$
- B : $Z = \sqrt{X^2 + (L-C)^2}$
- C : $Z = \sqrt{R^2 + (X_L \pm X_C)^2}$
- D : $Z = \sqrt{X_C^2 + (R^2 + L^2)}$

199 : Which formula is used to calculate power factor ($\cos\theta$) of an AC circuit?

- A : $\cos\theta = \frac{R}{Z}$
- B : $\cos\theta = \frac{V}{Z}$
- C : $\cos\theta = \frac{V}{X_L}$
- D : $\cos\theta = \frac{V}{X_C}$

Wireman – Semester 1 Module 8: AC Circuits

Reviewed and updated on: 01st November 2019 Version 1.1

200 : Which formula is used to calculate reactive power (P_r)?

- A : $P_r = VI \cos\theta$
B : $P_r = VI \sin\theta$
C : $P_r = W\theta$
D : $P_r = VI \tan\theta$
-

201 : What is the formula for calculating admittances (Y) of a AC parallel circuit?

A :
 $Y = G^2 + B^2$

B :

$$Y = \sqrt{G^2 + B^2}$$

C :

$$Y^2 = \sqrt{G + B}$$

D :

$$Y^2 = \sqrt{G + B^2}$$

202 : What is the reciprocal of resistance in AC parallel circuit?

- A : Reactance
B : Admittance
C : Conductance
D : Susceptance
-

203 : What is the S.I unit of frequency?

- A : Kilo Hertz
B : Hertz
C : Mega Hertz
D : Giga Hertz
-

204 : What is power in pure inductive AC circuit?

- A : 0 KW
B : 1 KW
C : 2 KW
D : 5 KW
-

205 : What is inductive reactance of AC inductive circuit if the inductance value is 4H?

- A : 1256 ohms
B : 1258 ohms
C : 1260 ohms
D : 1262 ohms
-

206 : What is the name of total opposition offered by RLC series circuit?

- A : Inductive reactance

B : Capacitive reactance

C : Impedance

D : Admittance

207 : Which formula is used to calculate the impedance (Z) of R.L.Series circuit?

A :

$$Z = \sqrt{R^2 + X_L^2}$$

B :

$$Z = \sqrt{R + X_L}$$

C :

$$Z = \sqrt{R^2 + X_L}$$

D :

$$Z = \sqrt{R + X_L}$$

208 : What is the formula for power in AC RC series circuit?

- A : VI
B : $VI \cos\theta$
C : $VI \sin\theta$
D : $\sqrt{3} VI$
-

209 : What is effect of current in a RC parallel circuit?

- A : I_C Leads I_R by 90°
B : I_C Lags I_R by 90°
C : I_R Leads I_C 90°
D : I_R & I_C are in phase
-

210 : What is impedance in AC, RL series circuit if resistance is 3 ohm and inductive reactance 4 ohm?

- A : 3 ohm
B : 5 ohm
C : 7 ohm
D : 12 ohm
-

211 : What is the relationship between line and phase current in delta connection?

A :

$$I_L = I_P$$

B :

$$I_L = \sqrt{3} I_P$$

C :

$$I_L = \frac{I_P}{\sqrt{3}}$$

D :

$$I_L = \sqrt{3} I_P$$

212 : Which formula to find phase voltage in 3 phase star connection?

A :

$$V_P = V_L$$

B :

$$V_P = \sqrt{3} V_L$$

C :

$$V_P = \frac{1}{\sqrt{3}} V_L$$

D :

$$V_P = \frac{V_L}{\sqrt{3}}$$

213 : What is the reactive power, if the active power is 4 Kw, and the apparent power is 5 Kw in a 3 phase circuit?

A : 1 Kw

B : 2 Kw

C : 3 Kw

D : 4 Kw

214 : Where the artificial neutral is required for measuring phase voltage in 3 phase circuit?

A : 3 wire star connected system

B : 4 wire star connected system

C : 3 wire delta connected system

D : 4 wire delta connected system

215 : What is the power factor, if one wattmeter reads zero and other reads some positive reading in two wattmeter method of 3 phase power measurement?

A : Unity

B : Above 0.5

C : 0.5

D : Below 0.5

216 : Which is the formula to calculate the power consumed in a balanced load in star or delta connected system?

A :

$$3 V_L I_L \cos\theta$$

B :

$$\sqrt{3} V_L I_L \cos\theta$$

C :

$$3 V_P I_P \cos\theta$$

D :

$$\sqrt{3} V_L I_L \sin\theta$$

217 : What is the name of star point in star connection system?

A : Neutral point

B : Cross point

C : Tapping point

D : Phase tapping wire

218 : What will be the neutral current in 3 phase-unbalanced circuits?

A : One

B : More than one

C : Zero

D : Not zero

219 : In a 3 balanced star connected system having a phase voltage of 240V calculate the line voltage in the circuit?

A : 400 V

B : 415 V

C : 430 V

D : 450 V

220 : Which type of the power measurement is used for balanced and unbalanced loads in 3 phase system?

A : Single wattmeter method

B : Two wattmeter method

C : Three wattmeter method

D : Voltmeter and ammeter method

Wireman – Semester 1 Module 9: Earthing

Reviewed and updated on: 01st November 2019 Version 1.1

- 221** : What is the purpose of system earthing?
A : To maintain ground at zero potential
B : To reduce the load current
C : To protect the equipment from over load
D : To reduce the losses

- 222** : Why earth resistance value required to keep very low?
A : For quick current flow
B : For easy measurement
C : For low power consumption
D : For low voltage drop

- 223** : What is the minimum length of the earth electrode pipe?
A : 1.5 metre
B : 2 metre
C : 2.25 metre
D : 2.5 metre

- 224** : What is the minimum size of the copper plate electrode?
A : 30cm to 30cm
B : 60cm X 40cm
C : 60cm X 50cm
D : 60cm X 60cm

- 225** : What will happen to the value of earth resistance, if length of the earth pipe is increased?
A : Remain same
B : Increases
C : Decreases
D : Infinity

- 226** : Which type of holder is to be earthed as per BIS?
A : Angle holder
B : Bracket holder
C : Battern lamp holder
D : Pendant lamp holder

- 227** : What is size of earth conductor used in power load?
A : 8 SWG
B : 10 SWG
C : 14 SWG
D : 20 SWG

- 228** : What is the range of good earth resistance?
A : High resistance
B : Very low resistance

- C** : Medium resistance
D : Very high resistance

- 229** : How earth resistance value maintained in summer?
A : Use new electrode
B : Use new coal and salt layer
C : Use new earth wire
D : Use water and maintain wet condition

- 230** : Which method is used to reduce earth resistance?
A : Reducing the pit depth for earthing
B : Increasing the depth of earth pit
C : Decreasing the length of the electrode
D : Connecting number of earth electrode in parallel

- 231** : Which instrument is used to measure earth resistance?
A : Megger
B : Ohm meter
C : Wheatstone bridge
D : Earth tester

- 232** : What principle earth tester works?
A : Potential dividing method
B : Fall of potential method
C : Fall of resistance method
D : Current dividing method

- 233** : What is the reason for supplying AC to the electrodes for measuring earth resistance?
A : AC is easily available
B : Protect the coils in the meter
C : Reduce the value of current in the meter
D : Avoid the effect of electrolytic Emf interference

- 234** : How many primary winding required in ELCB?
A : One primary winding
B : Two primary windings
C : Three primary windings
D : Four primary windings

- 235** : What is the purpose of the ELCB?
A : Control the fault circuit current
B : Protect the residual current
C : Protect the equipment from over load
D : Protect the circuit from short circuit

Wireman – Semester 1 Module 10: Basic Electronics

Reviewed and updated on: 01st November 2019 Version 1.1

236 : Which element is used as semi conductor?
A : Silver
B : Silicon
C : Copper
D : Aluminium

237 : How many electrons in a silicon atom?
A : 7
B : 14
C : 29
D : 32

238 : How the N type semi conductor is formed?
A : Germanium with aluminium
B : Silicon with antimony
C : Silicon with iridium
D : Silicon with arsenic

239 : Which element is used as impurity to provide N type semi conductor?
A : Arsenic
B : Aluminium
C : Gallium
D : Boron

240 : How the P - type semiconductor is formed?
A : Germanium with phosphorus
B : Silicon with aluminium
C : Germanium with antimony
D : Germanium with aluminium

241 : What does the depletion region behave?
A : Conductor
B : Insulator
C : Semi conductor
D : Resistor

242 : What does letter 2N indicate in the semiconductor device?
A : The diode PN junctions
B : The number of terminals
C : The device power
D : Two junction device

243 : What is the use of LED?
A : To rectify AC to DC
B : To reduce the ripple
C : To regulate the voltage
D : To indicate light

244 : What is the function of forward biased PN junction diode?
A : Act as uni directional switch
B : Act as bi directional switch
C : Act as control switch
D : Act as limit switch

245 : What is the PIV of the diode if the AC input voltage is 24V?
A : 32 V
B : 33 V
C : 34 V
D : 36 V

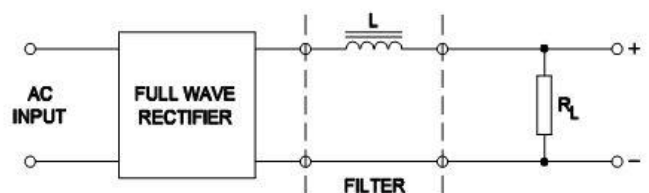
246 : What is the purpose of heat sink in electronic circuit?
A : Keep temperature desired range
B : Keep voltage desired range
C : Keep currents desired range
D : Keep resistance desired range

247 : Which material is used for making heat sink?
A : Copper
B : Aluminium
C : Iron
D : Zinc

248 : What is the expansion of PIV?
A : Peak Input Voltage
B : Positive Inverse Voltage
C : Peak Inverse Voltage
D : Phase Inverse Voltage

249 : What is the relation between input AC voltage (V_{ac}) and output DC voltage (V_{dc}) in full wave rectifier?
A : $V_{dc} = 0.45 V_{ac}$
B : $V_{dc} = 0.637 V_{ac}$
C : $V_{dc} = 0.707 V_{ac}$
D : $V_{dc} = 0.9 V_{ac}$

250 : Which type of filter?



A : PI filter

Wireman – Semester 1 Module 10: Basic Electronics

Reviewed and updated on: 01st November 2019 Version 1.1

- B** : Series Inductor filter
 - C** : RC filter
 - D** : Choke input LC filter
-

ANSWERS :

1:B; 2:D; 3:D; 4:A; 5:D; 6:D; 7:D; 8:A; 9:D; 10:B; 11:C;
12:D; 13:D; 14:B; 15:D; 16:D; 17:B; 18:B; 19:C; 20:C;
21:D; 22:C; 23:D; 24:B; 25:A; 26:C; 27:A; 28:B; 29:D;
30:A; 31:C; 32:C; 33:C; 34:D; 35:B; 36:C; 37:D; 38:C;
39:C; 40:C; 41:B; 42:D; 43:C; 44:C; 45:A; 46:B; 47:A;
48:B; 49:A; 50:A; 51:A; 52:C; 53:B; 54:A; 55:D; 56:B;
57:A; 58:B; 59:D; 60:B; 61:C; 62:B; 63:A; 64:A; 65:D;
66:C; 67:C; 68:A; 69:D; 70:B; 71:A; 72:A; 73:A; 74:D;
75:B; 76:B; 77:C; 78:A; 79:D; 80:C; 81:A; 82:B; 83:C;
84:A; 85:B; 86:C; 87:B; 88:D; 89:D; 90:C; 91:B; 92:D;
93:C; 94:B; 95:A; 96:B; 97:A; 98:B; 99:B; 100:A;
101:C; 102:B; 103:C; 104:D; 105:B; 106:C; 107:A;
108:B; 109:D; 110:C; 111:A; 112:B; 113:B; 114:B;
115:B; 116:A; 117:D; 118:A; 119:B; 120:B; 121:C;
122:B; 123:A; 124:D; 125:C; 126:C; 127:C; 128:A;
129:A; 130:D; 131:D; 132:D; 133:D; 134:D; 135:D;
136:D; 137:A; 138:C; 139:D; 140:D; 141:B; 142:D;
143:D; 144:D; 145:C; 146:B; 147:B; 148:C; 149:C;
150:C; 151:D; 152:C; 153:D; 154:B; 155:C; 156:A;
157:B; 158:A; 159:B; 160:D; 161:D; 162:B; 163:C;
164:A; 165:B; 166:C; 167:B; 168:B; 169:B; 170:B;
171:B; 172:D; 173:A; 174:A; 175:C; 176:D; 177:A;
178:A; 179:B; 180:D; 181:A; 182:D; 183:C; 184:D;
185:D; 186:C; 187:C; 188:C; 189:A; 190:D; 191:B;
192:D; 193:D; 194:C; 195:A; 196:B; 197:C; 198:C;
199:A; 200:B; 201:B; 202:C; 203:B; 204:A; 205:A;
206:C; 207:A; 208:B; 209:A; 210:B; 211:D; 212:D;
213:C; 214:C; 215:C; 216:B; 217:A; 218:D; 219:B;
220:B; 221:A; 222:A; 223:D; 224:D; 225:C; 226:B;
227:A; 228:B; 229:D; 230:D; 231:D; 232:B; 233:D;
234:B; 235:B; 236:B; 237:B; 238:B; 239:A; 240:B;
241:B; 242:D; 243:D; 244:A; 245:C; 246:A; 247:B;
248:C; 249:D; 250:B;