

Wireman – Semester 2 Module 1 - Measuring Instrument

Reviewed and updated on: 01st November 2019 Version 1.1

1 : What is the type of scale?



- A : Coarse fine scale
- B : Extended scale
- C : Linear scale
- D : Non linear scale

2 : Which classification of instrument tangent galvanometer belongs?

- A : Secondary instrument
- B : Absolute instrument
- C : Recording instrument
- D : Integrating instrument

3 : Which electrical effect, the moving iron instrument works?

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

4 : Which meter is used to measure only DC quantities?

- A : Moving iron repulsion type instrument
- B : Moving iron attraction type instrument
- C : Induction type instrument
- D : Moving coil instruments

5 : Which meter is used to measure the low and medium value of resistance?

- A : Shunt type ohm meter
- B : Megger
- C : Multimeter
- D : Series type ohm meter

6 : What is the disadvantage of induction type wattmeter?

- A : It is used only in AC
- B : It is used only in DC
- C : Cannot be used for higher current
- D : Cannot be used on both AC and DC

7 : Which is the advantage of dynamometer wattmeter?

- A : Uniform scale
- B : Less expensive
- C : High sensitivity
- D : Consumes less power

8 : Which factor the accuracy of ohmmeter depends?

- A : Type of scale
- B : Condition of battery
- C : Sensitivity of the meter
- D : Value of resistance to be measured

9 : What is the meter constant of an energy meter?

- A : Multiplication factor of energy meter
- B : Number of revolutions per KWh
- C : Initial reading of KWh
- D : Final reading of KWh meter

10 : Which meter is integrating type instrument?

- A : Wattmeter
- B : Ammeter
- C : Multimeter
- D : Energymeter

11 : What is the function of permanent magnet in an energy meter?

- A : Acts as a brake to the disc when the load is OFF
- B : It helps the disc to move when load is ON
- C : It reduces the friction error
- D : It gives path for the magnetic flux

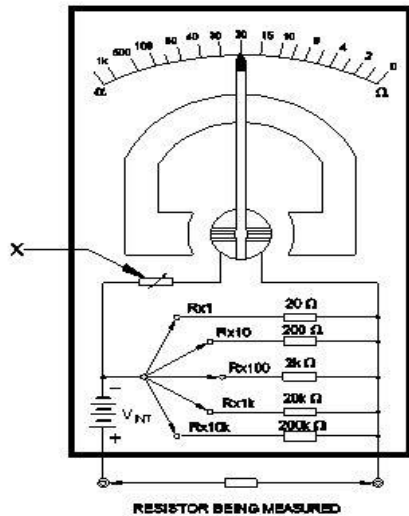
12 : Which error is caused by the braking system of energy meter?

- A : Creeping error
- B : Speed error
- C : Phase error
- D : Friction error

13 : How many segments in LCD displays in Digital Multi Meter (DMM)?

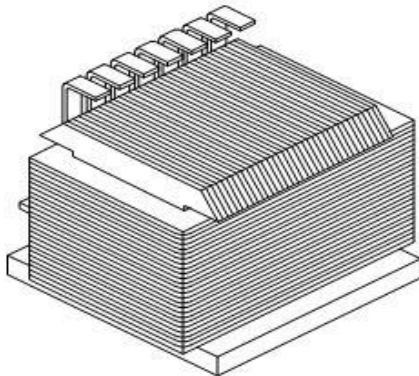
- A : 10
- B : 8
- C : 7
- D : 6

14 : What is the purpose of variable resistance marked as X of multimeter?



- A : To measure resistance accurately
- B : To adjust the pointer exactly at zero
- C : To measure DC voltage accurately
- D : To Measure AC voltage accurately

15 : What is the name of meter?



- A : Vibrating reed type frequency meter
- B : Weston type frequency meter
- C : Electro dynamo type frequency meter
- D : Ratio meter type frequency meter

16 : Which is the angle of two moving coils rigidly attached to each other of a dynamo meter type 3 phase P.F meter?

- A : 90°
- B : 120°
- C : 180°
- D : 360°

17 : Which principle the instrument transformers work?

- A : Self induction

- B : Mutual induction
- C : Fall in potential
- D : Lenz's law

18 : How the burden of current transformer is expressed?

- A : Watt
- B : Ampere hour
- C : Volt ampere
- D : Watt hour

19 : Why the pointer of a megger is in any place on the scale while it is in idle?

- A : The deflecting torque is proportional to current
- B : The deflecting torque on the meter is inversely proportional to current
- C : The instrument does not have controlling torque
- D : The deflecting torque is inversely proportional to square of the current

20 : Which principle earth tester works?

- A : Induction
- B : Magnetic attraction
- C : Magnetic deflection
- D : Fall of Potential

21 : What is the name of term that the ability of the measuring instrument to agree with itself repeatedly?

- A : Precision
- B : Sensitivity
- C : Resolution
- D : Accuracy

22 : What is the cause for creeping error in Energy meter?

- A : Change in resistance
- B : Improper power factor
- C : Rotation of disc when the load is OFF
- D : Abnormal friction of the moving system

23 : How the low range of the ammeter can be extended to higher range?

A : By connecting a shunt resistor in parallel across meter coil

B : By connecting a resistor in series with meter coil

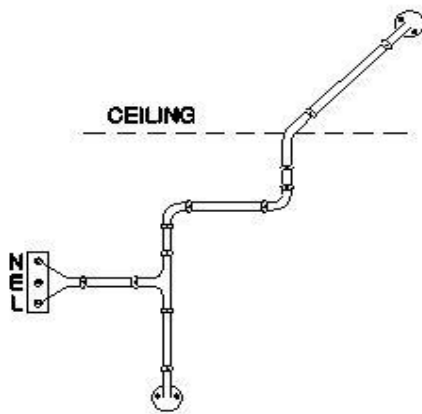
C : By connecting a resistor in series with supply

D : By connecting two resistors across with supply

Wireman – Semester 2 Module 2 - Electrical Wiring System

Reviewed and updated on: 01st November 2019 Version 1.1

24 : What is the name of wiring?



- A : CTS/TRS wiring
- B : Cleat wiring
- C : PVC casing & Capping wiring
- D : PVC conduit wiring

25 : Which diagram represents the physical position of accessories in the wiring installation?

- A : Wiring diagram
- B : Schematic diagram
- C : Installation plan
- D : Layout diagram

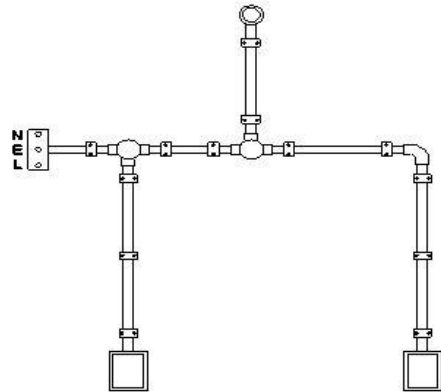
26 : Which wiring can be done either on surface (or) on concealed in the wall?

- A : Cleat wiring
- B : Batten wiring
- C : Pvc conduit wiring
- D : Pvc casing & Capping wiring

27 : What is the expansion of abbreviation TRS?

- A : Total Rubber Sheathed
- B : Tough Rubber Sheathed
- C : Tyre Round Sheathed
- D : Total rough sheathed

28 : What is the name of illustration?



- A : Layout diagram
- B : Circuit diagram
- C : Installation plan
- D : Wiring diagram

29 : How many outlet points are recommended in power sub-circuit as per BIS?

- A : 1 point
- B : 2 points
- C : 3 points
- D : 4 points

30 : What is maximum power recommended to the light and fan sub circuit as per IE rules?

- A : 3000 watts
- B : 1500 watts
- C : 800 watts
- D : 750 watts

31 : What is the recommended minimum height of socket outlet shall be provided in the bathroom?

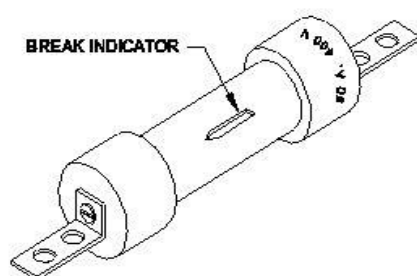
- A : 130 cm
- B : 140cm
- C : 150cm
- D : 200cm

32 : Which is represented by the BIS symbol?



- A : Fuse
- B : Link
- C : Resistor
- D : Plug and jacket

33 : What is the name of the fuse?



- A : Ferrule contact cartridge fuses
- B : High rupturing capacity fuses
- C : Diazed screw type cartridge fuses
- D : Rewirable fuses

34 : What is the name of term that the time taken by a fuse to interrupt the circuit in the event of fault?

- A : Fusing current
- B : Fusing factor
- C : Cut off factor
- D : Current rating

35 : Which is used to quench the arc quickly without any fire hazard?

- A : Dry sand
- B : Lime powder
- C : Graphite
- D : Silica

36 : Which type of fuse is used for electronic circuits?

- A : Ferrule contact cartridge fuses
- B : Re wireable type fuses

- C : HRC fuses
- D : Diazed screw type cartridge fuses

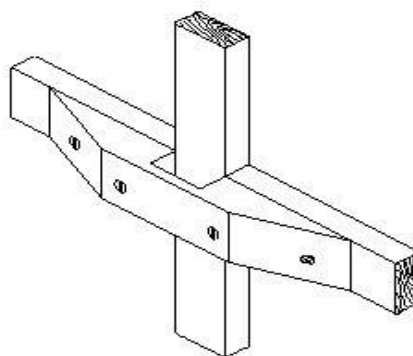
37 : Why the foot contacts of the fuse cartridges have different diameters for each rated current?

- A : To increase the current rating
- B : To increase the contact area
- C : To reduce the rating effect
- D : To prevent the insertion of wrong current rated cartridges

38 : Which is the minimum thickness of teak wood batten used for wiring?

- A : Not less than 5 mm
- B : Not less than 8 mm
- C : Not less than 10 mm
- D : Not less than 12 mm

39 : What is the name of teak wood joint?



- A : Cross joint
- B : Corner joint
- C : Cross bridge joint
- D : L Joint

40 : How the size of teak wood battens are specified?

- A : Width and length
- B : Thickness and length
- C : Width and thickness
- D : Length only

41 : Which type of joint is used to run the wires from horizontal position to the vertical position either down wards (or) upwards in T.W batten wiring?

- A : Half lap "T" joint
- B : Straight joint
- C : Corner joint
- D : L joint

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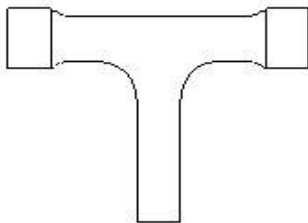
42 : What is the length of over lapping is to be provided for jointing 25 mm width batten in straight joint of T.W. batten?

- A : 19 mm
- B : 25 mm
- C : 30 mm
- D : 40 mm

43 : Which type of joint is used to extent the length of T.W batten?

- A : Cross joint
- B : Corner joint
- C : Straight joint
- D : "L" Joint

44 : What is the name of pvc conduit accessory?

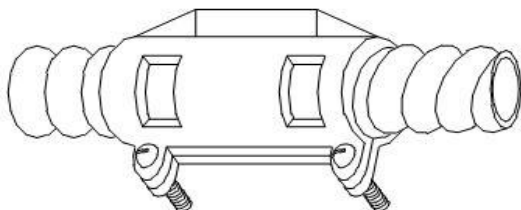


- A : Solid elbow
- B : Solid TEE
- C : Solid bend
- D : Coupler

45 : Which conduit fitting is used to join additional conduit pipe in long run of conduit wiring?

- A : Bend
- B : Elbow
- C : Tee
- D : Coupler

46 : What is the name of coupler?



- A : Screwed coupler
- B : Check nut running coupler
- C : Coupling for flexible conduit
- D : PVC conduit coupler

47 : Which type of wiring require less number of bends can be taken through shortcut route in the roof?

- A : Battern wiring
- B : Casing capping wiring
- C : Surface conduit wiring
- D : Concealed conduit wiring

48 : What is the advantage of concealed wiring?

- A : The cost of installation is low
- B : Easy to trace the fault
- C : Semi skilled technician can carryout the wiring
- D : Wiring can be done through the shortest route

49 : Which wiring has to be planned and executed only during the construction of building?

- A : CTS wiring
- B : Casing and capping wiring
- C : Surface conduit wiring
- D : Concealed wiring

50 : Which wiring is named as Wireways?

- A : PVC conduct wiring
- B : CTS Wiring
- C : PVC casing and capping wiring
- D : Metal conduct wiring

51 : How to attach the capping cover with casing (channel) after completion of wiring in PVC casing and capping system?

- A : By wood screws
- B : By wire nails
- C : By fixing clamp
- D : By sliding the capping through the grooves

52 : Which is the disadvantage of PVC casing and capping wiring?

- A : Cost is more
- B : Inflammable and risk of fire
- C : Requires skilled man power
- D : Extension not possible

53 : Which is the distance that the clips to be fixed on TW batten on horizontals run in the battern wiring?

- A : 8 cm
- B : 10 cm
- C : 12 cm
- D : 15 cm

Wireman – Semester 2 Module 2 - Electrical Wiring System

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54 : Which is the correct size of drill for making pilot holes for 6 mm diameter screw shank?

- A** : 2 mm
 - B** : 4 mm
 - C** : 6 mm
 - D** : 8 mm
-

55 : What is the depth of pilot hole for fixing wood screw in soft wood?

- A** : Equal to $\frac{1}{4}$ screw length
 - B** : Equal to $\frac{1}{2}$ screw length
 - C** : Equal to $\frac{3}{4}$ screw length
 - D** : Equal to screw length
-

Wireman – Semester 2 Module 3 - Domestic Wiring Practice

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56 : What is the name of wiring system that enables the appliances connected to the system to have the same voltage?

- A** : Distribution system
- B** : Tree system
- C** : Ring main system
- D** : Looping out from switch

57 : Which diagram indicates the Up and Down cable run and number of wires in the run?

- A** : Installation plan
- B** : Layout diagram
- C** : Circuit diagram
- D** : Wiring diagram

58 : Which type of wiring system requires special sockets or plug with fuse?

- A** : Tree system
- B** : Ring main system
- C** : Distribution board system
- D** : Looping from ceiling rose

59 : Which type of wiring system is suitable for multistorey building?

- A** : Tree system
- B** : Ring main system
- C** : Distribution board system
- D** : Looping out with junction box

60 : What is the standard size of GI earth wire in domestic installation?

- A** : 8 SWG
- B** : 10 SWG
- C** : 12 SWG
- D** : 14 SWG

61 : Which size of copper wire is used for lighting circuit?

- A** : 1 sq mm
- B** : 1.5 sq mm
- C** : 2.5 sq mm
- D** : 4 sq mm

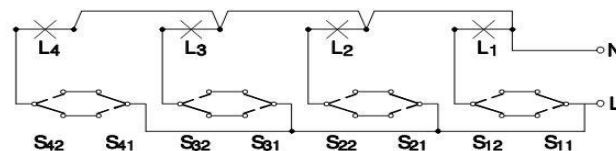
62 : Which type of light fittings are used for outdoor lighting purpose?

- A** : Bracket fitting
- B** : Bulk head lamp fitting
- C** : Water proof light fitting
- D** : Chain lamp fixture

63 : Which type of filler material is used after making holes?

- A** : Paper
- B** : Asbestos
- C** : Cotton
- D** : Clay

64 : What is the name of wiring circuit?



- A** : Tunnel wiring
- B** : Corridor wiring
- C** : Hostel wiring
- D** : Hospital wiring

65 : Which is four terminal switch?

- A** : One way switch three poles
- B** : Mult position switch single pole
- C** : Two way switch
- D** : Intermediate switch

66 : How many numbers of single way switch and two way switches are required for godown wiring with 5 lamps?

- A** : 2 single way & 3 two way
- B** : 4 single way & 1 two way
- C** : 1 single way & 4 two way
- D** : 3 one way & 2 two way

67 : How many two way switches are required to control one lamp from 3 different places?

- A** : 100.00%
- B** : 200.00%
- C** : 300.00%
- D** : 400.00%

68 : What is the name of wiring if one lamp controlled from two different places?

- A** : Go down wiring
- B** : Tunnel wiring
- C** : Stair case wiring
- D** : Hostel wiring

Wireman – Semester 2 Module 3 - Domestic Wiring Practice

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69 : Which diagram informs the reader about design of circuit without giving any information on the circuit itself?

- A** : Circuit diagram
- B** : Installation diagram
- C** : Layout diagram
- D** : Wiring diagram

70 : Which diagram indicates the physical position of accessories and final appearance of Installation?

- A** : Installation plan
- B** : Layout diagram
- C** : Circuit diagram
- D** : Wiring diagram

71 : Which wiring circuit needs to switch ON a lamp ahead, while the light behind is put OFF?

- A** : Staircase wiring
- B** : Godown wiring
- C** : Tunnel wiring
- D** : Corridor wiring

72 : Which wiring circuit is provided with one switch to operate ON or OFF all lights?

- A** : Tunnel wiring
- B** : Godown
- C** : Hostel wiring
- D** : Corridor wiring

73 : What is the purpose of circuit diagram in wiring installation?

- A** : Indicates with symbols and details of wiring method
- B** : It explains the function of various accessories
- C** : Represent physical position of accessories
- D** : Gives final appearance of installation

74 : Which material is used to make raw tool holder?

- A** : Carbon steel
- B** : Mild steel
- C** : Galvanized iron
- D** : Iron

75 : Which tool is used along with a hammer to make through hole in walls during wiring?

- A** : Pipe jumper
- B** : Rawl jumper
- C** : Cold chisel
- D** : Firmer chisel

76 : Which material is used for making the pipe jumper?

- A** : Mild steel
- B** : High carbon steel
- C** : Galvanized iron
- D** : Cast iron

77 : Which tool is used to make holes in the brick and concrete walls?

- A** : Rawl Jumper
- B** : Brawdle
- C** : Web chisel
- D** : Cold chisel

78 : How to avoid the broken of Rawl tool bit while making hole on the wall?

- A** : It should be kept at right angle to the wall surface
- B** : It should be kept less than 90° angle to the wall surface
- C** : Rawl tool bit is to be properly fitted
- D** : By using correct size of rowl tool bit

79 : How many numbers of single way switch and two way switch are required for Hostel wiring with 3 lamps?

- A** : 2 single way & 3 two way
- B** : 4 single way & 1 two way
- C** : 1 single way & 3 two way
- D** : 3 one way & 2 two way

80 : How many light, fan and 6A socket outlet points are recommended for a sub-circuit as per IE rule?

- A** : 7 Nos
- B** : 10 Nos
- C** : 12 Nos
- D** : 14 Nos

81 : Which is the height of horizontal run of cables as per NE code in domestic wiring?

- A** : 1.0 m
- B** : 1.5 m
- C** : 2.0 m
- D** : 2.5 m

Wireman – Semester 2 Module 3 - Domestic Wiring Practice

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82 : What is the recommended height of socket outlet from the floor level as per BIS?

- A : 1.3 m
- B : 2.0 m
- C : 2.5 m
- D : 3.0 m

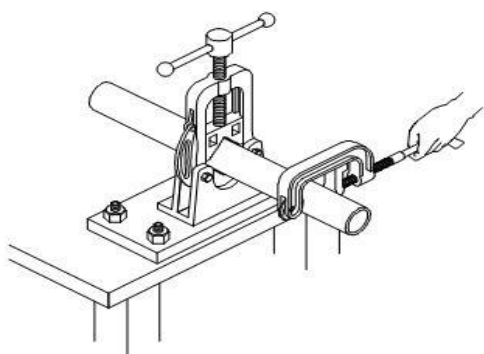
83 : Which helps the wireman and the consumer to select the materials for wiring?

- A : Estimation
- B : Drawing
- C : Specifications
- D : Cost of material

84 : Which factor is to be considered for selection of supply (Single (or) 3 phase) for wiring?

- A : Connected load
- B : Type of building
- C : Type of wiring system
- D : Size of cables

85 : What is the name of vice?



- A : Bench vice
- B : Carpenter vice
- C : Pipe vice
- D : Hand vice

86 : What is the minimum size of rigid steel conduit used for surface conduit wiring?

- A : 12 mm diameter
- B : 14 mm diameter
- C : 16 mm diameter
- D : 19 mm diameter

87 : What is the maximum threads needed to accommodate the pipes to the full threaded portion of accessories?

- A : Between 1 mm to 5 mm long
- B : Between 6 mm to 10 mm long
- C : Between 8 mm to 16 mm long
- D : Between 11mm to 27 mm long

88 : Which tool is used for cutting thread on the conduit pipe?

- A : Solid tap wrench
- B : Double ended adjustable tap wrench
- C : Stock and die set
- D : T-handle tap wrench

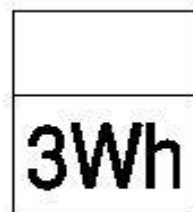
89 : What is the distance between the floor and distribution board as per IE rule in domestic wiring?

- A : 2 m
- B : 2.5 m
- C : 3 m
- D : 3.5 m

90 : What is the clear distance between teak wood board and the cover of Hinged type boards?

- A : 1.0 cm
- B : 1.5 cm
- C : 2.0 cm
- D : 2.5 cm

91 : Which is represented by the BIS symbol?

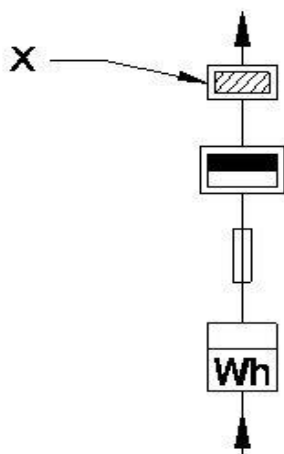


- A : Wattmeter
- B : Single phase energy meter
- C : 3 phase energy meter
- D : Power factor meter

92 : What precaution is to be followed before installing energy meter?

- A : It should have name plate details
- B : Readings on the display must be readable
- C : It should be tested and approved by the local EB authorities
- D : It must have atleast 2 years warranty period

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



- A** : Energy meter
- B** : I C cut out
- C** : Main Switch
- D** : Distribution board

94 : Which is the minimum clearance between the bottom point of the ceiling fan and the floor as per IE Rule?

- A** : 1.2 m
- B** : 1.8 m
- C** : 2.4 m
- D** : 3.2 m

95 : What is the resistance value of earth continuity conductor?

- A** : Higher than 1 ohm to 10 ohm
- B** : Should not be more than one ohm
- C** : Greater than 10 ohm to 100 ohm
- D** : Greater than 100 ohm

96 : Which is the length of pipe electrode used for pipe earthing?

- A** : Not less than 1 m
- B** : Not less than 1.5 m
- C** : Not less than 2.0 m
- D** : Not less than 2.5 m

97 : What is the thickness of copper plate used for plate earthing?

- A** : Not less than 2.0 mm
- B** : Not less than 2.5 mm
- C** : Not less than 3.15 mm
- D** : Not less than 6.5 mm

98 : Which method is preferred to reduce the value of earth resistance?

- A** : By increasing the dia of pipe
- B** : Connecting number of earth electrode in parallel
- C** : By increasing the depth of earth pit
- D** : By connecting insulated cables

99 : Where system earthing is employed?

- A** : Commercial buildings
- B** : Industries
- C** : Generating station
- D** : Domestic buildings

100 : Where plate earthing is used?

- A** : Commercial building
- B** : Substations
- C** : Industries
- D** : Multistoried buildings

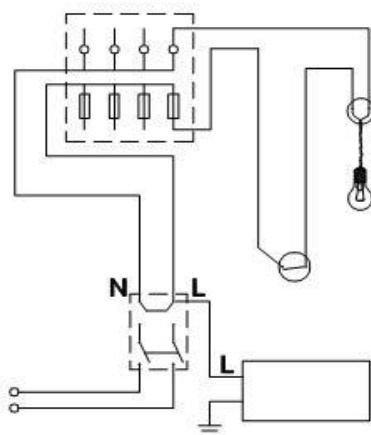
101 : What is the permissible leakage current in any wiring installation as per IE rule?

- A** : Not exceed 1/50th part of full load current
- B** : Not exceed 1/500th part of full load current
- C** : Not exceed 1/5000th part of full load current
- D** : Not exceed 1/50000th part of full load current

102 : Which range of megger is to be used to test the insulation resistance in medium voltage wiring installation as per BIS-732?

- A** : 500 Volt
- B** : 1000 Volt
- C** : 1500 Volt
- D** : 2000 Volt

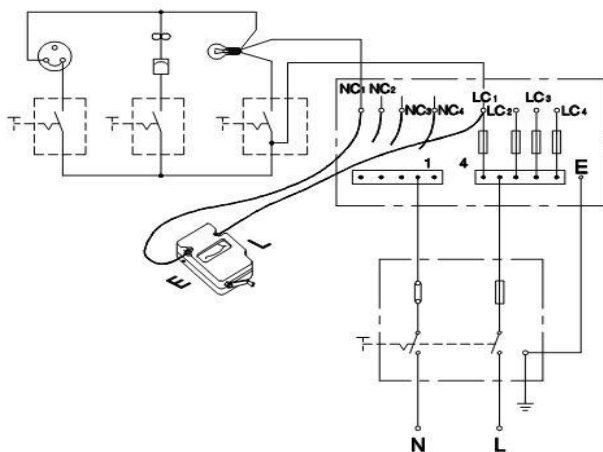
103 : Which type of testing for wiring installation is illustrated?



- A** : Insulation resistance test between conductors
- B** : Insulation resistance test between conductor and earth
- C** : Polarity test
- D** : Open circuit test

- C** : Insulation resistance test
- D** : Continuity test

104 : Which type of wiring installation testing is illustrated?



- A** : Open circuit test
- B** : Polarity test
- C** : Short circuit test
- D** : Insulation resistance test

105 : Which type test is to be carried out to check whether the switches are connected in live wire or not?

- A** : Ground test
- B** : Polarity test

106 : Which is the unit of luminous intensity?

- A : Candela
- B : Lumen
- C : Lumen/m²
- D : Lumen/watt

107 : Which is defined as that the luminous flux reaching a surface perpendicularly per unit area?

- A : Luminous flux
- B : Illuminance
- C : Luminous intensity
- D : Lux

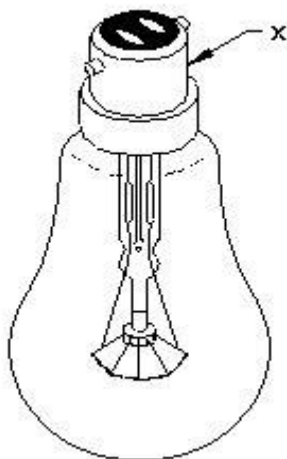
108 : Which is the property of good illumination?

- A : Should cover huge area
- B : Should have glaring light
- C : Should be low consumption
- D : Should not strain the eyes

109 : Which metal is used a filament incandescent lamps?

- A : Nichrome
- B : Tungsten
- C : Eureka
- D : Silver

110 : What is the name of cap marked as x of incandescent lamp?



- A : Edison screw cap
- B : Small bayonet cap
- C : Bayonet cap
- D : Giant edison screw cap

111 : Where halogen lamps are used?

- A : Domestic lighting
- B : Industrial lighting

- C : TV photography
- D : Out door lighting

112 : Which is coated in the tungsten filament of fluorescent tube lamp?

- A : Barium and strontium oxides
- B : Mercury
- C : Sodium
- D : Phosphor

113 : What is the expansion of CFL?

- A : Compressed filament lamp
- B : Cathode filament lamp
- C : Common fluorescent lamp
- D : Compact fluorescent lamp

114 : How strohoscopic effect is prevented in industrial twin tube light fitting?

- A : By connecting a capacitor parallel to supply
- B : By connecting a capacitor parallel to each tube
- C : By connecting a capacitor series with one tube
- D : By connecting a capacitor a series with both tube light

115 : Which type of fluorescent tube lamps are used for dimming and flashing circuits?

- A : Instant start fluorescent lamp
- B : Rapid start fluorescent tube lamp
- C : Fluorescent lamp single tube lamp
- D : Fluorescent lamp double tube lamp

116 : Which is cold cathode lamp?

- A : Mercury vapour lamp
- B : Fluorescent tube lamp
- C : Halogen lamp
- D : Neon lamp

117 : Which chemical composition powder gives green colour light in neon sign lamp?

- A : Zinc silicate
- B : Calcium tungstate
- C : Cadmium borate
- D : Magnesium tungstate

118 : Which position the MA type HPMV lamp is to be hung for lighting?

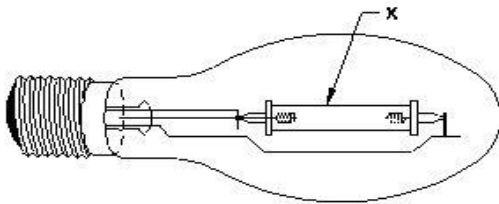
- A : Horizontally
- B : Vertically
- C : Inclined
- D : Any position

B : Miniature lamp

C : Flasher

D : Carbon filament lamp

119 : What is the name the part marked as x in High Pressure sodium vapour lamp?



- A : Electrode
- B : ARC tube
- C : Base
- D : Sodium vapour

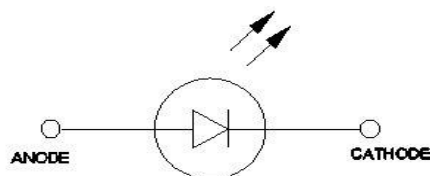
120 : Which colour light sodium vapour lamp gives?

- A : Yellow
- B : White
- C : Blue white
- D : Blue

121 : Which part of sodium vapour lamp fitting provides the ignition voltage initially and acts as a choke for limiting the current subsequently?

- A : Ignitor
- B : Leak transformer
- C : Capacitor
- D : Thermal starter

122 : Which is represented by the symbol?



- A : Photovoltaic cell
- B : LDR
- C : NTC resistor
- D : LED

123 : Which lamp acts only as switch instead of giving light?

- A : LED

Wireman – Semester 2 Module 5 - Industrial Wiring Practice

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124 : Which wiring is preferred for motor connection in industries?

- A : CTS wiring
- B : TRS wiring
- C : PVC conduct wiring
- D : Metal conduct wiring

125 : Which factor determines the size of wire to be used for industrial motor wiring?

- A : Load current
- B : Supply voltage
- C : Type of motor
- D : Purpose of motor

126 : How many sections of wiring are there in industrial wiring?

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

127 : Which is the purpose of control wiring?

- A : To limit the load current
- B : To increase the motor input voltage
- C : To communicate the commands to control devices
- D : To measure the load current

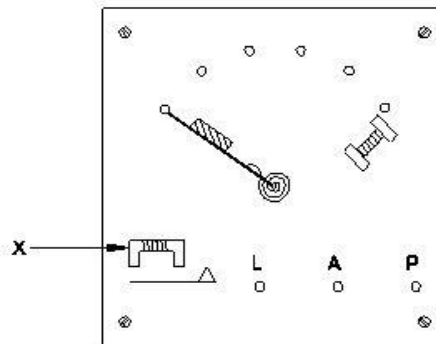
128 : Why power and control wiring is to be run in a separate conduit in industrial motor wiring?

- A : For easy maintenance
- B : To avoid current radiation
- C : For easy identification
- D : To reduce the voltage drop

129 : Which place the control ON/OFF switches is to be placed a industrial motor wiring?

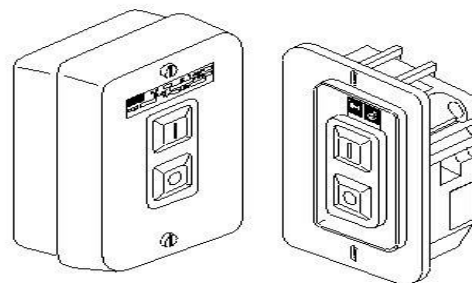
- A : Near the control panel
- B : Near the input main
- C : Near the entrance
- D : Near the motor

130 : Which is the part name marked as x starter face plate arrangement?



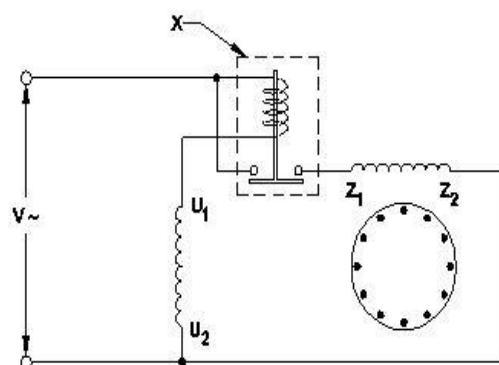
- A : over load relay
- B : No volt coil
- C : Sprial spring
- D : Studs

131 : Which is the name of starter?



- A : Auto star delta starter
- B : Manual star delta starter
- C : D.O.L starter
- D : MINI manual starter

132 : Which is the name of relay marked as x?



- A : Under voltage relay
- B : Electromagnetic relay
- C : Over voltage relay
- D : Time delay relay

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133 : Why over load relay coil is wound with thick gauge of copper wire?

- A : To carry the line voltage
- B : To reduce voltage drop
- C : To carry load current
- D : To reduce the power loss

134 : Which is the purpose of single phasing preventor in 3 phase motor circuit?

- A : To protect the motor from damage
- B : To run the motor continuously at single phasing
- C : To regulate the supply voltage
- D : To protect the motor from over load

135 : What is the formula to calculate the value of insulation resistance while testing the wiring?

A :

$$I.R = \frac{\text{Leakage current}}{\text{supply voltage}}$$

B :

$$I.R = \frac{\text{Load current}}{\text{supply voltage}}$$

C :

$$I.R = \frac{\text{Supply voltage}}{\text{Leakage current}}$$

D :

$$I.R = \frac{\text{Supply voltage}}{\text{Load current}}$$

136 : What is the formula to calculate the standard value of Insulation Resistance (R_i) as per BIS?

A :

$$R_1 = \frac{25}{\text{No. of points in the circuit}} \text{ M}\Omega$$

B :

$$R_1 = \frac{50}{\text{No. of switches in the circuit}} \text{ M}\Omega$$

C :

$$R_1 = \frac{50}{\text{No. of points in the circuit}} \text{ M}\Omega$$

D :

$$R_1 = \frac{50}{\text{No. of amphenols in the circuit}} \text{ M}\Omega$$

137 : Which is the unit of insulation resistance?

- A : Milli ohm
- B : Ohm
- C : kilo ohm
- D : Mega ohm

138 : Which rated voltage megger is used to measure the insulation resistance value of 3phase 415V induction motor?

- A : 250V
- B : 500V
- C : 1000V
- D : 2500V

139 : Which instrument is used to measure the insulation resistance?

- A : Shunt type ohmmeter
- B : Series type ohmmeter
- C : Megger
- D : Multimeter

140 : What is the main reason for leakage current flowing in wiring installation?

- A : Insulation failure
- B : Low earth resistance
- C : Incorrect size of earth wire
- D : High earth reactance

141 : How many earth continuity conductors should be provided from the machine to panel board and to the main earth electrode?

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

142 : Which size of GI conductor is used for earthing to the motor from the main electrode?

- A : 14 SWG
- B : 10 SWG
- C : 8 SWG
- D : 4 SWG

143 : What is the colour code of protective earthing conductor as per NE code?

- A : Blue
- B : Black
- C : Green
- D : Red

144 : What is the recommended resistance value of earth continuity conductor used in domestic wiring installation as per IE Rules?

- A : Not more than 8 ohm
- B : Not more than 3 ohm
- C : Not more than 2 ohm
- D : Not more than 1 ohm

145 : How many earth is to be provided for a AC 3 phase induction motor?

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

146 : How to reduce the earth resistance value keep as low?

- A : By connecting two earth in series
- B : By adding more charcole
- C : By connecting to earth in parallel
- D : By adding more salt

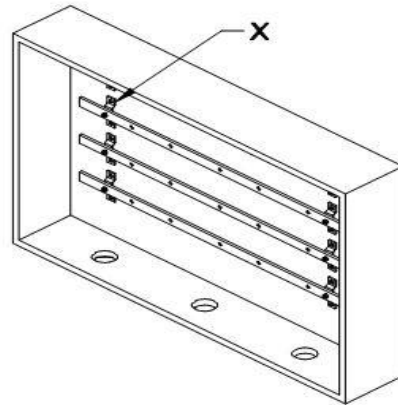
147 : What is the minimum clearance required between the wall and backside of a panel board in industrial wiring?

- A : Not less than 22.88 cm
- B : Not less than 18.4 cm
- C : Not less than 15.8 cm
- D : Not less than 10.2 cm

148 : What is the minimum distance in front of the switch board for industrial pannel board wiring?

- A : 2 M
- B : 1-5 M
- C : 1 M
- D : 0.5 M

149 : What is name of part marked asx?



- A : Cable entry hole
- B : Bus - bars
- C : Enclosure
- D : Porcelain supports

150 : What is the thickness of steel sheet using the covers of bus bar chamber?

- A : 1 mm
- B : 1.5 mm
- C : 2 mm
- D : 2.5 mm

151 : Why the equipment are arranged in front side of the switch board in industrial wiring?

- A : To avoid short circuit
- B : To operate easily
- C : To test the supply frequently
- D : To avoid personnal contacts during maintenance

152 : What is the purpose of openings provided in bus bar chamber?

- A : For cable entries
- B : For air circulation
- C : To release the heat
- D : To extend the busbar

153 : Which material is used to make busbars?

- A : Brass
- B : Galvanised iron
- C : Aluminium
- D : Bronze

154 : What is the colour code of 3 phase 4 wire AC supply system?

- A** : Red, yellow, black, green
 - B** : Red, blue, black, yellow
 - C** : Red, black, green, blue
 - D** : Red, yellow, blue, black
-

155 : What is the colour code of single phase AC supply as per NE code?

- A** : Red and blue
 - B** : Red and black
 - C** : Red and green
 - D** : Red and yellow
-

156 : What is the alpha numeric notation of 3 phase apparatus connection?

- A** : L1, L2, L3 & N
 - B** : U, V, W & N
 - C** : R, Y, B & N
 - D** : A1, B1, C1 & N
-

157 : Which material is used for harnessing of cable?

- A** : Metal bands
 - B** : P.V.C sleeves
 - C** : Link clips
 - D** : P.V.C saddles
-

158 : How the cable size is determined for industrial wiring?

- A** : By considering the voltage of circuit
 - B** : By considering the load resistance
 - C** : By considering the current carrying capacity
 - D** : By considering the power factor
-

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159 : What is the minimum bus bar clearance between phases in medium voltage application?

- A** : 25 mm
- B** : 32 mm
- C** : 36 mm
- D** : 40 mm

160 : What is the maximum permissible voltage drop at the point of the commencement of supply at the consumers end for high and extra high voltage as per IE rule?

- A** : 12.5%
- B** : 8%
- C** : 5%
- D** : 3%

161 : How the cable is to be connected with the distribution boards as per IE rule?

- A** : By crimping lugs without cutting any cable strands
- B** : By crimping lugs with some strands cut off
- C** : By directly inserting the strands into terminals
- D** : By twisting the strands and inserting into terminals

162 : Which is used to protect the conductors that passing through walls in commercial wiring as per IE rules?

- A** : Wood batten
- B** : Rigid metal conduit
- C** : Flexible metal conduit
- D** : Flexible non metal conduit

163 : What is the full form of LAN?

- A** : Load Area Network
- B** : Local Area Network
- C** : Local Aviation Network
- D** : Local Active Network

164 : Which is the inter processor distance of LAN?

- A** : Above 1000 km
- B** : 10 km to 1000 km
- C** : 1 km to 10 km
- D** : 0 to 1 km

165 : Which is the data transmission medium in LAN?

- A** : PVC cable
- B** : Armoured cable

- C** : Belted cable
- D** : Coaxial cable

166 : What is the characteristics of LAN?

- A** : Consist one computer only
- B** : Group of 2 or more computers in the same building
- C** : Group of computers in different building
- D** : Group of computers in different area

167 : What is electrical drive?

- A** : Electro mechanical device
- B** : Electrical device
- C** : Electronic device
- D** : Mechanical device

168 : Which is the application of electrical drives?

- A** : Agricultural pumps
- B** : Fabricating workshop
- C** : Water treatment plant
- D** : Electric traction

169 : Which is the advantage of AC drive?

- A** : Power and control circuit are simple
- B** : Speed and design ratios have upper limits
- C** : Produce a simulated wave form
- D** : Heavy windings required

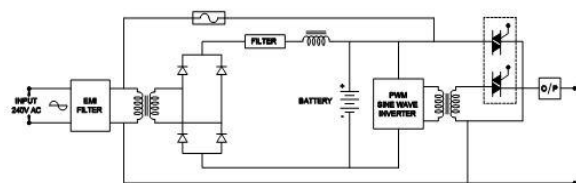
170 : Which colour LED indicates the fault occurred in drives?

- A** : Green
- B** : Yellow
- C** : Red
- D** : Blue

171 : What is the expansion of UPS?

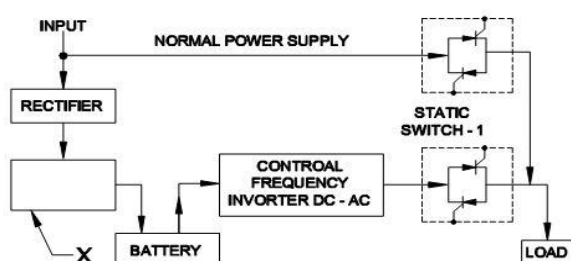
- A** : Uninterrupted Power System
- B** : Uninterrupted Power Supply
- C** : Uninterrupted Power Solution
- D** : Uninterrupted Power Section

172 : Which circuit diagram is illustrated?



- A : ON line UPS
- B : OFF line UPS
- C : Bridge rectifier
- D : Metal rectifier

173 : Which part is marked as in the block diagram of OFF line UPS?



- A : Reset switch
- B : Change over switch
- C : Control panel
- D : Battery charger

174 : What is the relation between back up time and capacity of the battery of an UPS?

- A : Capacity of battery increases back up time increases
- B : Capacity of battery increases back up time decreases
- C : Capacity of battery decreases back up time increases
- D : Capacity of battery has no relations with back up time

175 : Which component is connected across the transformer winding of an UPS for protection from lightning?

- A : Diode
- B : Transistor
- C : Triode
- D : Polyster capacitor

176 : Which electrical / electronic device requires ups?

- A : Air conditioner
- B : Micro wave oven

- C : Computer
- D : Television

177 : Why the battery is to be placed nearer to ups in ups wiring?

- A : To minimise the length of cable
- B : For safety reasons
- C : To increase the life of battery
- D : To reduce voltage drop

178 : What adjustment is to be done in commercial installation for interconnection of two or more UPS?

- A : By connecting manually
- B : By using a change over relay
- C : By using rotary switch
- D : By using ICDP switch

179 : How the capacity of an inverter is expressed?

- A : Watt hour
- B : Ampere
- C : Volt ampere
- D : Ampere hour

180 : Which wire is used to connect inverter and battery?

- A : PVC 1.5 sqmm copper wire
- B : Special auto wire
- C : PVC 1.5 sqmm aluminium wire
- D : PVC 2.5 sqmm copper wire

181 : How the neutral is provided in an inverter?

- A : It is common for inverter output and AC mains
- B : Separate neutral wire is provided
- C : Neutral is provided for out put only
- D : Neutral is provided for AC mains only

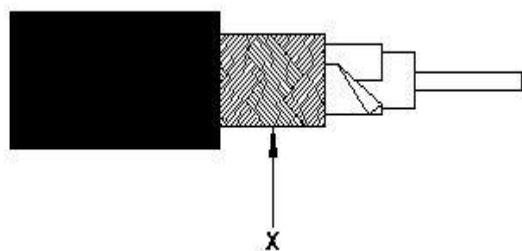
Wireman – Semester 2 Module 7 - Commercial wiring II

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182 : How many colour coded wires the RJ-45 cable contains?

- A : 4
- B : 6
- C : 8
- D : 10

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



- A : Jacket
- B : Foil
- C : Dielectric
- D : Braid

184 : What are the two colours used in 2 pairs of Ethernet RJ 45 cable?

- A : Blue and orange
- B : Blue and brown
- C : Orange and green
- D : Brown and orange

185 : What does the name coaxial refer?

- A : Common axis of two conductors
- B : Common array of all conductor
- C : Common conductor axis
- D : Common axial of one conductor

186 : What is the use of co - axial cable?

- A : For transmitting electricity
- B : For power wiring
- C : For transmitting video signals
- D : For house wiring

187 : Which computer networking component connect multiple ethernet segments together?

- A : Router
- B : Switch
- C : Bridge
- D : Hub

188 : What is the reason for using annealed copper conductor for telephone cable?

- A : For good physical appearance

B : For high dielectric strength

C : To get more flexibility

D : To avoid corrosion

189 : What is the full form of DTH system?

- A : Direction to home
- B : Divert to home
- C : Direct to home
- D : Distance to house

190 : What is the size of speaker wire if the distance between speaker and amplifier is less than 50 feet?

- A : 10 swg
- B : 12 swg
- C : 16 swg
- D : 18 swg

191 : What is the full form of UTP copper wiring?

- A : Uniform sheated Turns Package
- B : Unshielded Twisted Pair
- C : Unshielded Turns Pair
- D : Universal stranded Twisted Package

192 : What are the three main factors to be considered for DTH wiring?

- A : Safety, planning, budgeting
- B : Collection of material, wiring, testing
- C : Marking layout, fixing of accessories, wiring
- D : Measuring, marking layout, wiring

193 : Which cable is used for DTH termination to TV?

- A : RJ 45 cable
- B : Lead sheathed cable
- C : CTS cable
- D : Weather Proof cable

194 : Why correct thickness of wire must be selected for DTH/home theater connection?

- A : To minimize the voltage drop in wiring circuit
- B : To obtain good speaker performance
- C : To increase the electrical conductive of the wire
- D : To avoid loose connections on the terminal of the components

Wireman – Semester 2 Module 7 - Commercial wiring II

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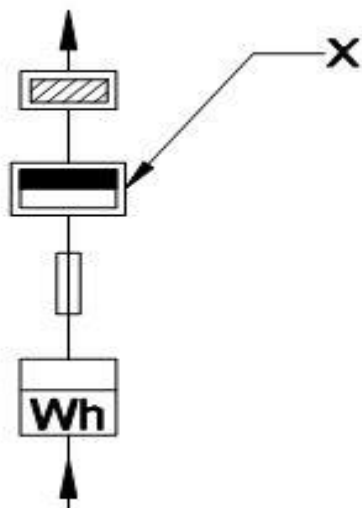
195 : What is the reason, the cables of Home theatre must be run away from the power supplies?

- A** : To get more clarity video
- B** : To avoid interference with audio and video of musical item
- C** : To avoid short circuit between power conductor wiring
- D** : To protect the components from impact of audio

196 : Which factor is noticed as an impact on home theatre wiring?

- A** : Speaker performance
- B** : Video component performance
- C** : Space of the room installation
- D** : Interference issues of wiring

197 : What is the name of part marked as?



- A** : Energy meter
- B** : I C cut out
- C** : Main Switch
- D** : Distribution board

198 : What percentage limit of error is permitted to the energy meter used for service meter board?

- A** : 1%
- B** : 2%
- C** : 3%
- D** : 5%

199 : Which location, the IC cut out is to be connected in service meter board?

- A** : Between main switch and distribution board
- B** : Between energy meter and main switch

- C** : First position of the service meter band
- D** : Last position of the service board connection

200 : What is the minimum height of energy meter fixing as per NE code of practise and IE rules?

- A** : 1 metre
- B** : 1.5 metre
- C** : 1.75 metre
- D** : 2 metre

201 : Which tool is used to make holes for fixing meter board in walls during wiring?

- A** : Pipe jumper
- B** : Rawl jumper
- C** : Cold chisel
- D** : Crow bar

202 : What is the use of Rawl jumper while fixing energy meter board on wall?

- A** : To make pilot hole on the wooden gutties
- B** : To make holes on the bricks
- C** : To mark the hole points on the wall
- D** : To make grooves on the concrete

203 : Where the wooden gutties are used in wiring?

- A** : Wooden board
- B** : Metal board
- C** : Rigid walls
- D** : Non-rigid walls

204 : Which is to be considered to select the size of ECC for earthing to service meter?

- A** : Supply voltage from supplier side
- B** : Type of wiring installation done in the system
- C** : Current carrying capacity of installation
- D** : Type of wiring material used

205 : Which material is used to prepare heating element?

- A** : Copper
- B** : Aluminium
- C** : Nichrome
- D** : Silver

206 : What is the formula to calculate the thermal efficiency?

A :

$$\% \text{ Efficiency} = \frac{\text{Heat utilised}}{\text{Heat generated}} \times 100$$

B :

$$\% \text{ Efficiency} = \frac{\text{Heat generated}}{\text{Heat utilised}} \times 100$$

C :

$$\% \text{ Efficiency} = \frac{\text{Input}}{\text{Output}} \times 100$$

D :

$$\% \text{ Efficiency} = \frac{\text{Raise of heat}}{\text{Heat generated}} \times 100$$

207 : What is the formula for heat generated?

A :

$$H = \frac{I^2 R t}{J} \text{ calories}$$

B :

$$H = I^2 R t \text{ calories}$$

C :

$$H = I^2 R \text{ calories}$$

D :

$$H = \frac{J}{I^2 R t} \text{ calories}$$

208 : Which material, the heater plate is made of?

A : Porcelain

B : Ceramic

C : Ebonite

D : Bakelite

209 : Where the heating element is placed in an immersion type heater?

A : Near the outer seating

B : Inside a hollow tube

C : Out side the body

D : Below the body

210 : Why the grooves are designed with projection in heater plate?

A : For the uniform distribution of heat

B : To prevent the heating element from coming out of grooves

C : To reduce the space for coiled heating element

D : To increase the resistance of the heating element

211 : Which metal is used to make contact points of thermostat?

A : Copper

B : Silver

C : Aluminium

D : Brass

212 : What is the property of heating element used in electrical heating appliances?

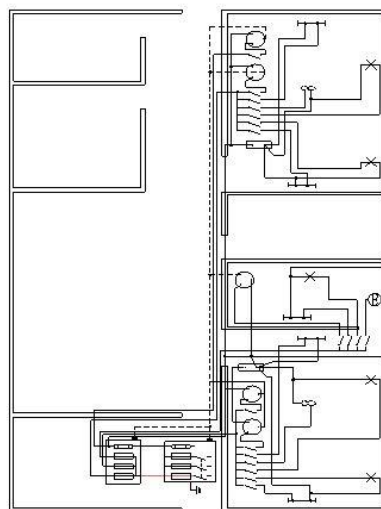
A : Low co efficient of expansion

B : Low specific resistance

C : Low mechanical strength

D : Low voltage withstanding

213 : What is the name of diagram?



A : Wiring diagram

B : Installation diagram

C : Layout diagram

D : Circuit diagram

214 : Which is the permissible voltage drop in declared voltage supply to HT consumer as per IE rule?

A : Not more than 5%

B : Not more than 8%

C : Not more than 10%

D : Not more than 12%

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215 : Which formula is used to calculate the permissible voltage drop in 3 phase wiring circuits (I=line current R= Resistance of one core only)

A :

$$\sqrt{3} IR$$

B : 3 IR

C : IR

D : 2IR

216 : Which wiring system is suitable for high rise buildings?

A : Looping out from switches

B : Distribution system

C : Ring main system

D : Tree system

217 : Which type of distribution is suitable for commercial wiring of multistoried flats?

A : Looping out with junction

B : Looping out with switch

C : Bus chamber

D : Raising mains

218 : Which system of wiring enables the appliances connected to the system to have same voltage?

A : Ring main system

B : Raising main system

C : Distribution board system

D : Tree system

219 : How many earths are to be provided along with the vertical run of raising mains in commercial building wiring?

A : 1

B : 2

C : 3

D : 4

220 : Which load is to be given separate lines as essential in commercial wiring?

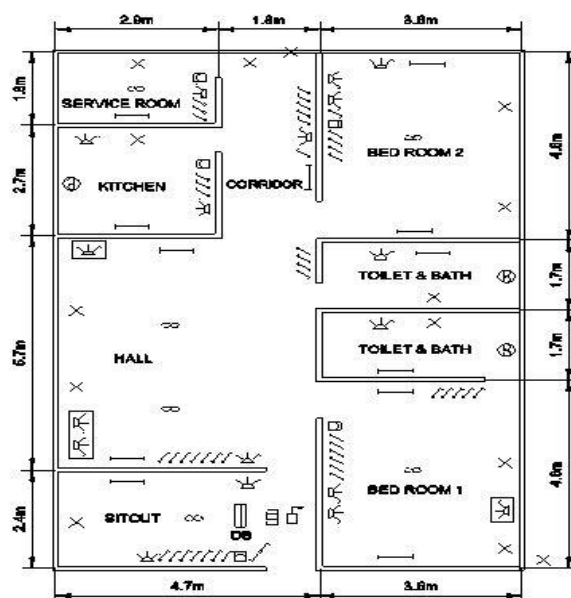
A : Stair case and garden

B : Verandah and portico

C : Common walking area

D : Lift and water supply

221 : How many wall socket are located in hall of the building layout?



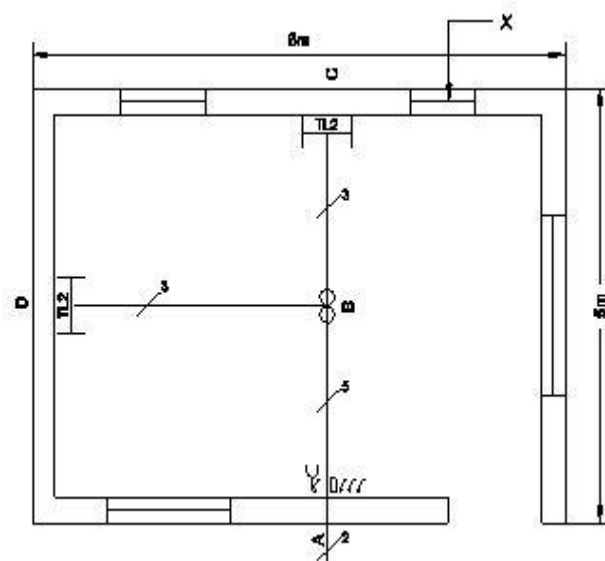
A : 2

B : 3

C : 4

D : 5

222 : What is the name of the symbol marked as x in the layout diagram?



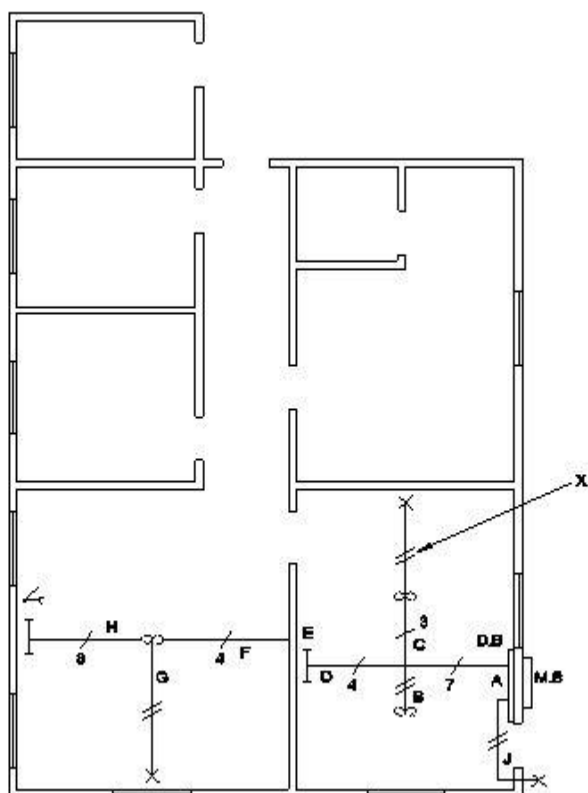
A : Single tube fluorescent lamp fitting

B : Twin tube fluorescent lamp fitting

C : Incandescent lamp

D : Fan regulator

223 : What does the marking, marked as x represent in the office layout?

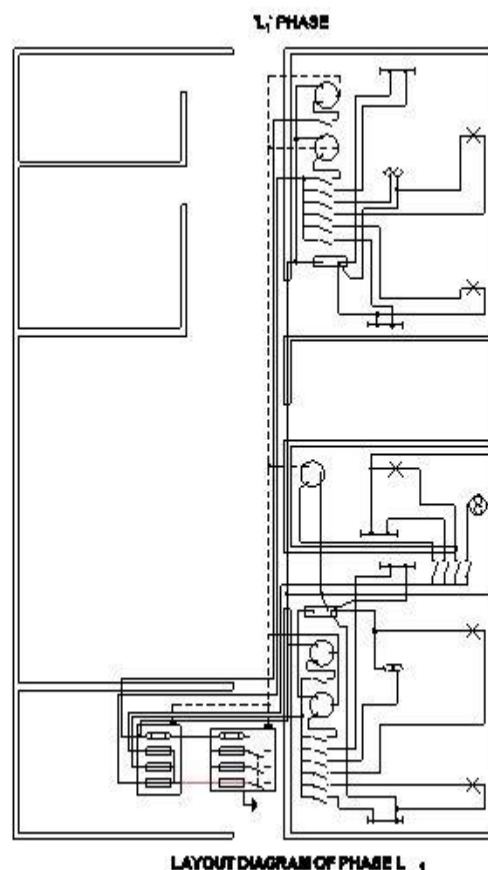


- A** : Size of each wire in mm²
- B** : Number of wire runs
- C** : Number of pipes runs
- D** : Number of wires inside the pipe

224 : Which is the purpose of layout diagram used for building installation?

- A** : To locate the position of electrical points in each used in the building
- B** : To calculate the total connected load
- C** : To estimate the labour cost for wiring
- D** : To estimate the material cost for wiring installation

225 : How many branch circuits are used in the layout diagram?



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

226 : How much starting current of motor with respect to load current for calculation of cable size?

- A** : One time of full load current
- B** : One and half time of full load current
- C** : Two times of full load current
- D** : Three times of full load current

227 : What is the name of computer part?



- A : MIC
- B : BAR code reader
- C : Flash light
- D : Camera

228 : What is the expansion of CPU?

- A : Central Performance Unit
- B : Central Processing Unit
- C : Control Processing Unit
- D : Control Performance Unit

229 : Which part is the pointing device in computer?

- A : Key
- B : Monitor
- C : Mouse
- D : CPU

230 : Which part of the computer performs mathematical operations?

- A : Control unit
- B : Arithmetic logic unit (ALU)
- C : Mouse
- D : Key board

231 : Which is the input device of computer system?

- A : Keyboard
- B : Projector
- C : Floppy
- D : Printer

232 : Which is the output device of the computer?

- A : Printer
- B : Mouse

- C : Key board
- D : Scanner

233 : Which output device is used for audio signals?

- A : Plotter
- B : Monitor
- C : Projector
- D : Speakers

234 : What is the use of printers?

- A : To store the data from soft copy
- B : To create hard copies of computer files
- C : To make more number of photo copies
- D : To print the data from hard copy

235 : What is the expansion of RAM?

- A : Random Arithmetic Memory
- B : Read Arithmetic Memory
- C : Read Access Memory
- D : Random Access Memory

236 : What is the name of the storage device?



- A : Memory card
- B : Video tape
- C : Floppy disc drive
- D : Hard disc drive

237 : How many mega bytes (MB) is equal to 1 giga byte (GB)?

- A : 10 MB
- B : 100 MB
- C : 1000 MB
- D : 1024 MB

238 : Which is a temporary storage for data and programmes that are being accessed by the CPU?

- A : RAM
- B : ROM
- C : DVD
- D : USB flash drive

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239 : Which storage memory the contents are erased if the computer is powered OFF?

- A : ROM
- B : PROM
- C : RAM
- D : EPROM

240 : How many versions of windows operating system are available?

- A : 2
- B : 3
- C : 4
- D : 5

241 : What is the other name of MS-Excel?

- A : Electronic spread sheet
- B : Electronic file
- C : Electronic document
- D : Electronic chart

242 : Which short cut key is used to bring the text to centre in MS word?

- A : Ctrl + E
- B : Ctrl + S
- C : Ctrl + C
- D : Ctrl + X

243 : Which command is used to display each slide without menus (or) tool bar?

- A : Slide sorter view
- B : Slide show view
- C : New slide
- D : Slides group

244 : What is the expansion of WWW?

- A : Web Wise World
- B : World Wide Web
- C : World Wise Web
- D : Word Wide Web

245 : Which is the free open source web browser from mozilla?

- A : Opera
- B : Fire box
- C : Google chrome
- D : Internet explorer

246 : Which browser is preferred for small devices like mobile phone?

- A : Firefox
- B : Opera

- C : Mozilla
- D : Netscape

247 : Which browser is an inbuilt browser in windows?

- A : Google chrome
- B : Internet explorer
- C : Mozilla firefox
- D : Operamini

248 : What is the expansion of E-mail?

- A : Enter mail
- B : Electronic mail
- C : Economic mail
- D : Education mail

249 : What is the full form of URL internet address?

- A : Uniform resource location
- B : Universal resource location
- C : Uniform resolution location
- D : Unique resource location

250 : Which folder in e-mail store messages that have not been sent?

- A : Inbox
- B : Drafts
- C : Sent
- D : Spam

251 : Which default folder of E-mail that places the scanning e-mails?

- A : Drafts
- B : Spam
- C : Inbox
- D : Trash

ANSWERS :

1:C; 2:B; 3:C; 4:D; 5:A; 6:A; 7:A; 8:B; 9:B; 10:D; 11:A;
12:B; 13:C; 14:B; 15:A; 16:B; 17:B; 18:C; 19:C; 20:D;
21:A; 22:C; 23:A; 24:B; 25:C; 26:C; 27:B; 28:C; 29:B;
30:C; 31:A; 32:A; 33:B; 34:C; 35:D; 36:A; 37:D; 38:D;
39:C; 40:C; 41:A; 42:D; 43:C; 44:B; 45:D; 46:C; 47:D;
48:D; 49:D; 50:C; 51:D; 52:B; 53:B; 54:B; 55:B; 56:A;
57:B; 58:B; 59:A; 60:D; 61:A; 62:C; 63:B; 64:B; 65:D;
66:C; 67:D; 68:C; 69:C; 70:A; 71:B; 72:C; 73:B; 74:B;
75:A; 76:C; 77:A; 78:A; 79:C; 80:B; 81:D; 82:A; 83:C;
84:A; 85:C; 86:C; 87:D; 88:C; 89:A; 90:D; 91:C; 92:C;
93:D; 94:C; 95:B; 96:D; 97:C; 98:B; 99:C; 100:B;
101:C; 102:A; 103:B; 104:A; 105:B; 106:A; 107:B;
108:D; 109:B; 110:C; 111:C; 112:A; 113:D; 114:C;
115:B; 116:D; 117:A; 118:B; 119:B; 120:A; 121:B;
122:D; 123:C; 124:D; 125:A; 126:B; 127:C; 128:B;
129:D; 130:A; 131:D; 132:B; 133:C; 134:A; 135:C;
136:C; 137:D; 138:C; 139:C; 140:A; 141:C; 142:C;
143:C; 144:D; 145:B; 146:C; 147:B; 148:C; 149:D;
150:B; 151:D; 152:A; 153:C; 154:D; 155:B; 156:B;
157:A; 158:C; 159:B; 160:A; 161:A; 162:B; 163:B;
164:D; 165:D; 166:B; 167:A; 168:D; 169:B; 170:C;
171:B; 172:A; 173:D; 174:A; 175:D; 176:C; 177:D;
178:B; 179:C; 180:B; 181:A; 182:C; 183:D; 184:C;
185:A; 186:C; 187:D; 188:C; 189:C; 190:C; 191:B;
192:A; 193:A; 194:B; 195:B; 196:A; 197:C; 198:C;
199:B; 200:A; 201:B; 202:B; 203:D; 204:C; 205:C;
206:A; 207:A; 208:A; 209:B; 210:B; 211:B; 212:A;
213:C; 214:D; 215:A; 216:D; 217:D; 218:C; 219:B;
220:D; 221:C; 222:A; 223:B; 224:A; 225:C; 226:D;
227:B; 228:B; 229:C; 230:B; 231:A; 232:A; 233:D;
234:B; 235:D; 236:D; 237:D; 238:B; 239:C; 240:C;
241:A; 242:A; 243:B; 244:B; 245:B; 246:B; 247:B;
248:B; 249:A; 250:B; 251:C;