Interview PDF Book - 1

SR ELECTRICAL TRAINING CENTER

1. What is Ohm's Law?

A. The relationship between the current passing through and the potential difference between the ends of a wire. As a result of this experiment, he arrived at a law, now known as Ohm's law, which says that..
the current passing through a conductor under constant temperature conditions is proportional to the potential difference across the conductor.

. { FORMULA : I =V/R, R=V/I, V= I×R }

I =CURRENT, R = RESISTANCE, V = VOLTAGE.

2. What is Resistance?

A. Electrical Resistance The property of a conductor which opposes the flow of electric current through it is known as resistance. Its symbol is R and its unit of measurement is ohm represented by Q (omega). The instrument that measures resistance is known as an ohmmeter. Good conductors have small resistances and insulators have large resistances.

3. What is current ?

A. ElectrieCurrentThe flowof (electricity) electronsin one directionalong any path or around any circuitis called eleciric current. Jts symbol is I and its unit is ampere (A). The instrumentby which the current is measured is called an ampere meter which is always connectedin series with the circuit.

4. What is Conductance?

A. The property of a conductor which conducts the flow of current through it is called conductance. In other words, conductance is the reciprocal of resistance. Its symbol is G.

5. What is EMF ?

A. Electro Motive Force (emf) The force which causes current to flow in the circuit is called emf. Its symbol is E and is measured in volts (V).
emf = Vt + IR.

6. What is Voltage?

A. Voltage It is the electrical potential (i.e. pressure) between any two live wires or between one live wire and earth. Its symbol is V and the unit of measurement is volts. It js also measured by a voltmeter.

7. What is voltage Drop?

A. Voltage Drop It is the voltage developed across acomponent or conductor by the fiow of current through the resistance (or impedance) of that component or conductors.its unit is the volt and is mesured by a voltmeter.

8. What is Direct Current?

A. It is the current which always flows in one direction. it is also known as continuous current or unidirectional current. It is denoted by “dc”. This type of current is obtained from a cell, battery, dc generator, dc rectifier, etc. Itis used for battery charging, electro plating work, etc. |

9. What is AC (Alternating Current) ?

A. Alternating current is that current which alters both in value and direction periodically. It is denoted by “ac”. This current increases from zero to the maximum value and then decreases to zefoin one direction and again increases from zero to the maximum value and then decreases to zero in the opposite direction.

10. What is Resistor?

A. Resistor A fixed resistance connected permanently in the circuit for limiting the current to a definite value is called a resistor. It should be capable of withstanding the temperature developed in it.

11. What is Volt meter?

A. A voltmeter is used to measure the potential difference . Therefore it must be connected n parallel to the circuit of which the potential difference is to be measured. A voltmeter must have high resistance otherwise it will take heavy current. When a voltmeter is connected in series, it measures the voltage drop across its own terminals. For connecting be voltmeter in parallel to the circuit.

12. What is watt?

A. Watt It is a unit of electrical power. A watt is equal to the energy expanded per second by an unvarying current of one ampere under the pressure of one volt. It is denoted by the citer Wand is measured by an instrument known as Wattmeter.

$$\text{Wattage} = \text{Voltage} \times \text{Current}$$

13. What is Power?

A. Power may be defined as the rate of doing work. In other words, we can say that it is the work done per second.

$$\text{Power} = \text{work done} / \text{time}$$

14. What is work?

A. Work is said to be done by force F when the point of its ‘application moves through a distance S.

$$\text{Work} = \text{Force} \times \text{Distance}$$

15. What is magnetic circuit?

A. the complete path of magnetic lines of force from north to south and eternally and from south to north internally called the magnetic circuit.

16. What is magnetic field?

A. The space occupied by the lines of force around a magnet is Called the magnetic field.

17. What is magnetic flux?

A. Magnetic Flux The total number of lines of force existing in a magnetic field is called the magnetic flux. Its symbol is ¢ (phi).

18. What is DC generator?

A. A generator is a machine which takes mechanical energy and converts it into electricity.

19. What is the working principle of DC Generator?

A. A generator works on the principle of Faraday's law of electromagnetic induction which says that whenever a Conductor is moved in the magnetic field, an emf is generated in the , conductors and the magnitude of the induced : emf is directly proportional to the rate of the cutting flux.

20. What is the alternator?

A. The emf generated in the conductor is of alternating nature and the generator which gives out electrical energy in the form of alternating _ current is called an alternator.

21. What is motor?

A. A motor is a machine that takes electrical , energy and converts it into mechanical energy.

22. What is flaming left hand rule?

A. Fleming's Left Hand Rule This rule is applicable in the case..of dc motors to find the direction of force developed on current-carrying conductors that are placed in a magnetic field.

This rule states that if you spread your left hand in such a way that the thumb, first finger and middle finger are at right angles, the first finger points in the direction of flux (from north to south) and the middle finger in the direction of current in the conductor, then the thumb will indicate the direction in which the force will act on the conductor.

23. What is alternating current?

A. A. An alternating current is that current whose magnitude and direction periodically it is donated by AC.

24. What is Cycle?

A. Cycle One complete set of change in value and direction of alternating quantities emf or current is called a cycle.

25. What is Frequency?

A. The number of cycles completed fre Second (hertz or Hz) is known as the frequency of the alternating current. It is 'presented by letter f.
The standard frequency in most countries, including India, Is 50Hz.

26. What is RMS Value?

A. Root Mean Square (rms) Value The rms value of an alternating current (or emf) is expressed by that direct current which when applied to a circuit for a given time, produces the same amount of heat energy as when the alternating current (or emf) is applied to the same circuit for the same time. Itis also known 'as the effective or virtual value.

27. What is phase?

A. Phase During a complete cycle, an alternating current goes through various stages or phases of development at a given instant, Starting from zero, it reaches its maximum Value (positive) half) and then fall down to zero. It then again rises in the reverse direction (negative half) and finally falls down zero thus completing a cycle. The development of an ac quantity through different stages is known as phase. |

28. What is form factor?

A. Form Factor The ratio of the rms value to the average value is called the form factor,

29. What is Impedance?

A. The vector sum of resistances and reactances (the total opposition) connected in an ac circuit is call ed impedance. Its unit is ohm and is indicated by the letter Z.

30. What is Capacitor?

A. A device capable of storing electric chargein it, when it is connected across the supply, is Known as a condenser or capacitor.

31. what is Polyphase?

A single-phase system in diferent ac circuits. It is also possible to generate two-phase and three-phase supplies and from them we can have four, six, nine and twelve phases. A system with two or more than two phases is known asa polyphase system .

32. Whats is the Line Voltage?

A. Line Voltage The voltage between any two phases of the supply system is called line . voltage and is denoted by VL.

33. Whtat is Line current?

A. Line Current The current flowing betwen any two phases of the windings is termed as line current and is denoted by (IL).

34. What is the Phase Voltage?

A. Phase Voltage The voltage between one. of the phases and the neutral terminal is known as phase voltage and is represented by (Vph).

35. What is the Phase Current?

A. Phase Current The current flowing through any of the phase windings is called phase current and is denoted by (I ph)

36. What is the phase power?

A. Phase Power The power measured between a phase and the neutral terminal is known as phase power.

37. What is Contactor?

A. Contactor: It works on the Faraday's law of electromagnetic working principle, when an operating coil is supplied to the contact, the operating coil energies in it.Then the main contact and the auxiliary contact of that contact will change from the same position to the opposite position,

Because:- 1) Normally, those in open position will change to close position.

2) Normally, those in close position will change to open position.

A contact is used to turn on and off all three phases simultaneously. It cannot be manually operated by hand, only by remote electrical control, it is an electromagnetic device.

38. What is switch?

A. Switch is a Make, brake, carrying current.

39.what is Isolator?

A. As a switch, only ON, OFF is used.No protection, isolator looks like MCB, isolator symbol is also like switch symbol, mcb has overload symbol.

40. What is Relay?

A. relay is electromagnet to mechanical operate,as a switch.

41. What is Fuse?

A. A fuse will mold or melt when the current is too high.

42. What is overload?

A. 1) When the current taken by an mcb is more than its capacity, the mcb trips and this is called overload.

2) If a motor is loaded more than the maximum load (full load), it is called overload.

43. What is short circuit?

A. :- 1) Short circuit occurs when any two phases meet. 2) Any phase and neutral combination will be short circuited. 3) Any phase and Earth combilnation will short circuit.

44. What is Earth leakage?

A. 1) If the insulation on the conductor is cut or damaged, weak and any earth related cable touches it, earth leakage will occur.

2) Earth leakage also occurs when cable total insulation is damaged.

45. What is MCB?

A. Mcb (miniature circuit breaker) :Mcb (miniature circuit breaker):- Changing a big circuit breaker into a small one is called mini.

Mcb : 1) Over load

2) short circuit protection.

In which :-

1) Biometric strips - to overload.

2) Electro magnet coil - useful for short circuit.

Mcb are 3 types, 1) B. Curve 2) c- curve 3) D- curve

Types :- 1) B-curve - used sensitivity circuits.

Within Sec on trip, Ex : Hospitals. Tripping Current :- (3 to 5) Times Full load Current.

Operating Time :- (0.04 to 3 sec)

2) C - curve - General Purpose:-

Ex:- Fan circuit, light circuit, power socket.

Tripping current :- (5 to 10) times Full load current.

Operating time :- (0.04 to 5sec)

3) D-curve - heavy purpose, motor circuit, instrumental transformer, capacitor.

Tripping current :- (10 to 20) times full load current.

Operating time :- (0.04 to 13sec)

Mcb does not work for earth leakage.

Let us indicate in MCB capacity (kilo Ampere).

(I&t) breaking capacity in product, more.

MCB : 6A to 100A last.

46. What is MCCB?

A. Mccb (molded case circuit breaker) :- It is higher than mcb, lower than ACB, In mcb, there is only overload, short circuit protection. In mccb it works for short circuit, earth leakage, overload current, under voltage, it also has protection only for overload and short circuit.Everything else is optional.There is an extra connect slot.If K slot is needed, we will use that slot.In which over load is fixing up to 70%. 30% we can adjust from 70%.

Mccb [16 A to 1250A or 16A to 1600A)

Mccb has 3pole and 4pole.

Mccb is taken when the load is more than 630 A.

Place can be used near less.

It should be operated sequentially, on/off should not be done for many times.

Because if the mccb is repaired it cannot be made working again.

Ex: It is given to incoming and outgoing.

47. What is RCCB?

A. Rccb : Residual current circuit breaker.

Rccb measures earth leakage current only or residual current equal to earth leakage.

(25 A, 32A, 40A, 630A, 100A)

It is available in 2pole and 4 pole.

[2pole looks a little bigger, like 4 pole size, 4 pole looks like 8 pole sizes.

Rccb has 3 types senstivelege.

1) 30 ma

2) 50 ma

3) 300 ma.1ma = 1/1000A

Rccb, Elcb, Rcbo, Elmcb all have same sensitivity.

1) 30ma, 50ma shok = generally used commercially in human being places.

2) 100ma - we use industrial purpose

3) 300ma : Expectation of leakage current is used near.

Ex : 1) When Ac to Dc goes, leakage current comes and earth leakage loki goes.

2) We use it near resistance load.

3)every, above instrument is in leakage current (mA).

48. What is ELCB?

A. Earth leakage circuit breaker:-

There is current and voltage in earth leakage, ELCB trips the milli voltage present in earth leakage.In which 2pole, 3 pole only, Range [25A, 32A, 40A, 63A, 100A],

Do not protect overload and short circuit.

49. What is ELMCB?

A. ELMCB:- ELCB+MCB [earth leakage miniature circuit breaker]

2 pole, 4 pole, 6A to 63A. (6A, 10A, 16A, 25A, 32A, 40A, 63A).

It is used for short circuit, earth leakage, over load.

50. What is RCBO?

A. Residual current breaker with overload.

2 pole, 4 pole, 6A to 63A. (6A, 10A, 16A, 25A,32A, 40A). It is used for short circuit, earth leakage, over load

51. What is circuit breaker?

A. A circuit breaker is a mechanical switching device, capable of making, caring and breaking under normal and abnormal conditions.

52. What is ACB?

A. ACB : Air circuit breaker:- Spark or Arc occurs when current is made, broken. That spark is direct, not sent out, it sends little by little.

52. What is VCB?

A. vacuum circuit breaker - Spark stops due to lack of oxygen, internally switch ON/OFF.

53. What is Oil circuit breacker?

A. It is an oil can type and closes the arc inside.

55. What is Sf6?

A. Sulfur fluoride gas is an insulated material.

56. What is OLR?

A. Overload Relay :- It consists of coil and biometric strips.When they heat, the auxiliary contact connected to it changes from NC to open. This cannot be given to the main contact, there are no switches in between. These are 2 types
1) biometallic 2) Relay connect from CT input, Only over load protection.

57. What is CT?

A. Ct is measuring of current instrument protective device, we connect it as series only.
Ct Ratio = 100/ 5A.

58. What is PT?

A. PT : potential transformer : converts high voltage to low voltage.
PT ratio = 11kv/110v

59. What is Capacitor?

A. starting induction and pf correction (power factor).

60. What is PF?

A. power factor :- cosine of the angle between voltage and current.

61. What is power cable termination?

A. For a power cable, from the fixed gland point to the lug, the used termination is called the power termination.

62. Why do we use gland?

A. We use the lug fixed to the cable to avoid load and for mechanical strength, earth purpose.
Mechanical strength: without putting load on the lug, the gland gives mechanical strength (protection) and gives protection that can withstand any weather.
Earth purpose :- When the armor of the cable is fixed to the body of the gland. When any short circuit occurs, the supply goes to earth through the armature fixed to the gland.

63. What is gland material?

A. Gun metal - for mechanical strength
Brass - without gland rust

64. What is types of glands and differences?

A. 1) single compression gland
1) medium duty
2) heavy duty.
2)Double compression Gland.
1) weather proof
2) flame proof.

65. Difference between single compression gland parts and double compression gland parts?

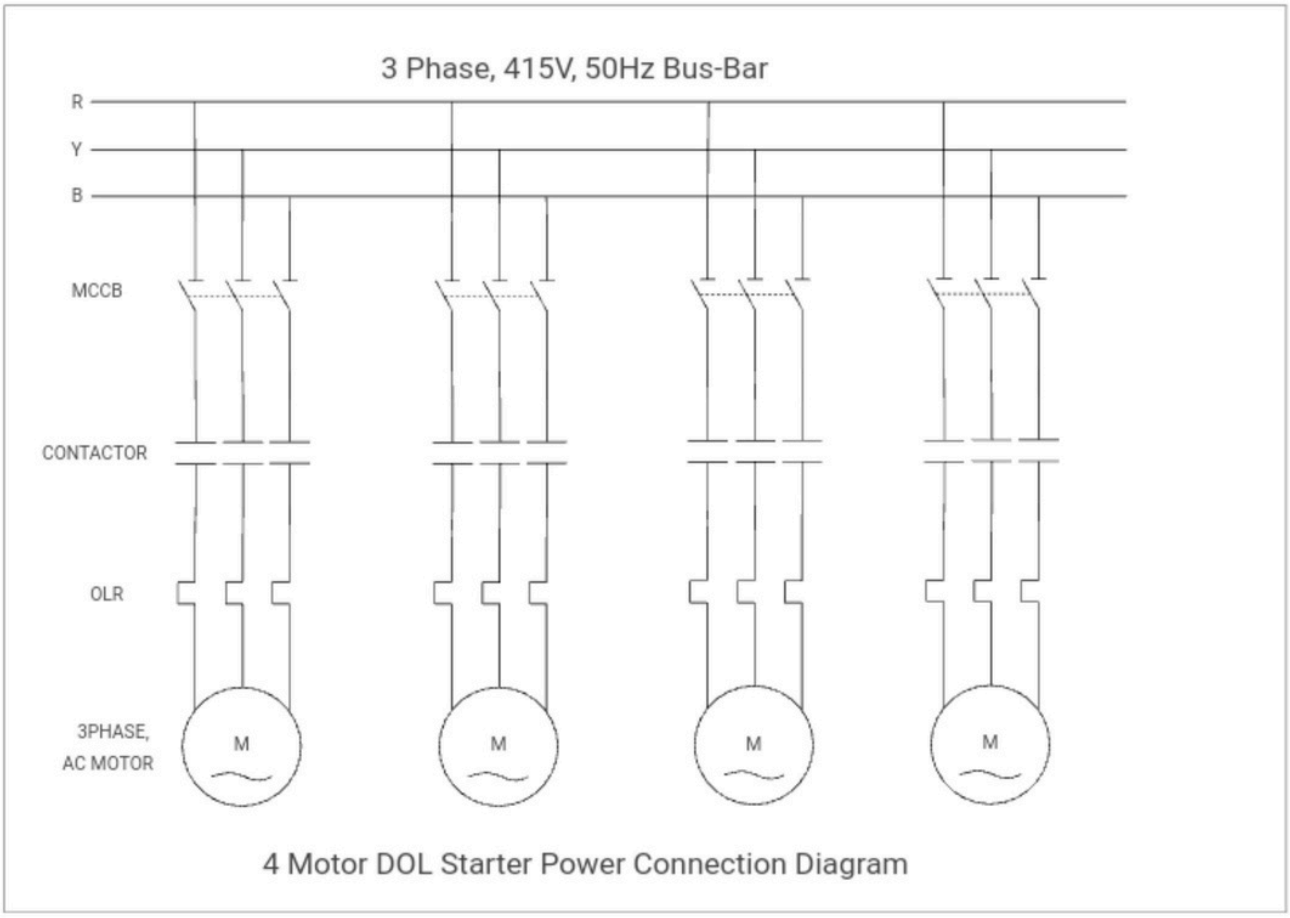
A. Single compression gland :-
1.Checknut,2. bland body,3. Metal washer,4. Metal washer,5. Outer seal rubber washer,6. Metal washer,7 compression nut.
Double compression gland:- 1. Check nut, 2. Gland body, 3. Armour clamping cone,4. neoprene ring,5. Armour clamping ring, 6. Armour clamping nut,7.neoprenr ring,8.s

66. Why we use starter in three phase motor?

A. At the time of starting the motor takes heavy current suddenly to initiate such heavy torque .
But the sudden heavy current flow in the winding results in high temperature rise because of copper losses which leads to damage of the winding in motor.
If we use the starter it will limits the current as per to develop the torque slowly.

67. What is Dol stater?

A. A direct on line (DOL) or across the line starter applies the full line voltage to the motor terminals. This is the simplest type of motor starter. A DOL motor starter also contains protection devices, and in some cases, condition monitoring.
The applications of DOL starters are primarily motors where a high inrush current does not cause excessive voltage drop in the...



4 Motor DOL Starter Power Connection Diagram

Advantages :- low cost, low maintenance, High Torque.
Disadvantages:- starting current 6 to 8 times reccived on full load current.

68. Calculate 1hp in Amps?

A. 1Hp = 746 w

= root 3×V.I×

cos pi

Root 3

value=1.73

V=415v

Cos pi value =

0.85

I =?

I = 746/

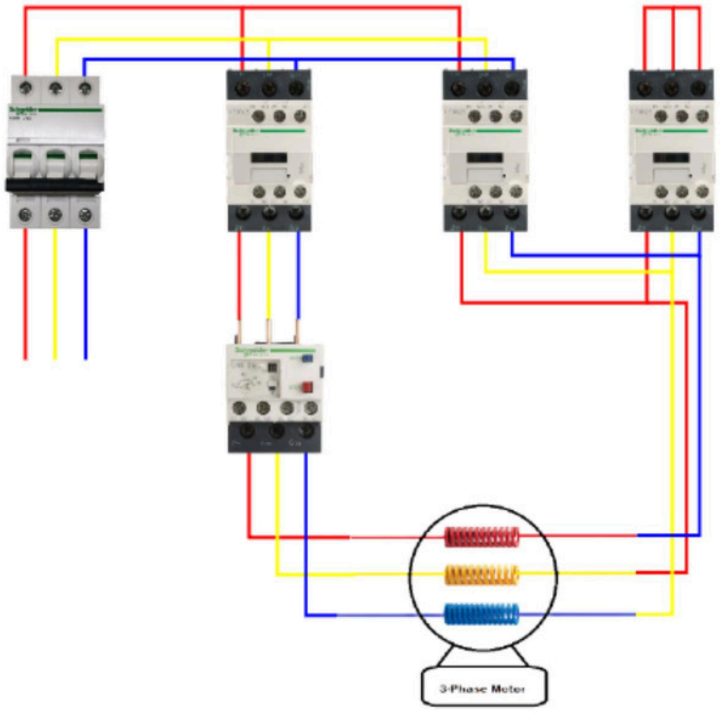
root3 vI cos pi

= 746/610.25

I= 1.22A

69. what is Star Delta Starter?

A. The main advantage of a Star delta starter is that it will prevent Voltage drop in the bus due to the high starting current of an induction motor. Generally motors of 5HP or more are started using Star delta starter. The starter will first start the motor in Star configuration resulting in lesser voltage across its winding and lesser current drawn. After a certain time the configuration is switched to delta at which the motor runs at its rated speed.



STAR DETA STARTER POWER WIRING DIAGRAM

Advantage's : it reduces the mechanical stress on the motors hence less motor burning is caused. 2.The operation of the star-delta method is simple and rugged.

Disadvantages:- high cost,It has a long starting time compared to the DOL starter.Starting torque is reduced but it cannot be adjusted.

70. What is transformer?

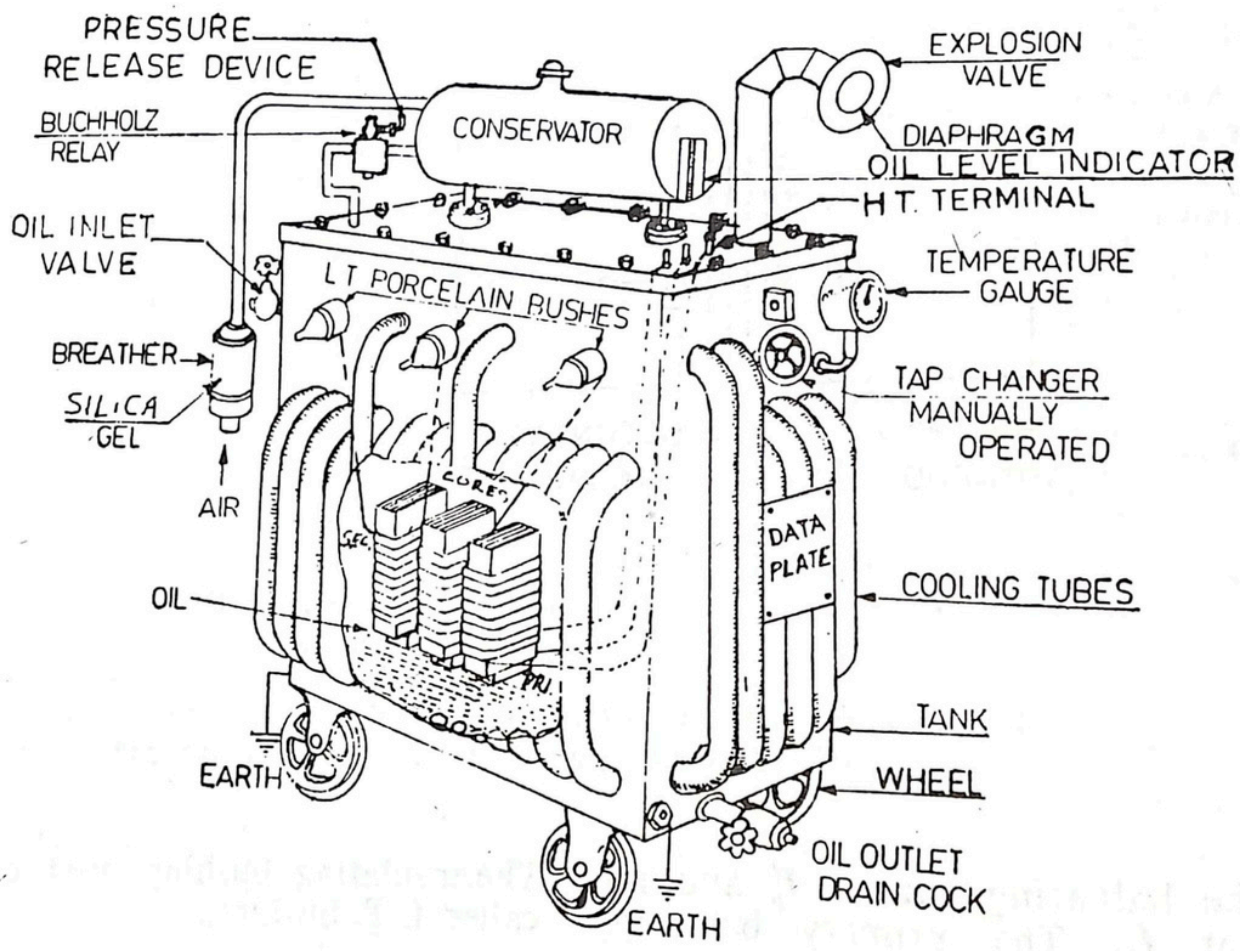
A. The transformer is a static machine which increases or decreases the ac voltage without changing the frequency of the supply. As it has no rotating part, its efficiency is much higher than apy rotating-type electrical machine. Energy supplied to the transformer tay be converted to higher voltage or lower voltage or sometime at the same voltage. If it delivers energy at lower voltage, then is known as step-down transformer. If it delivers energy at increased voltage it is called step-up transformer. If it delivers energy at the same voltage, then it is called 1-to-1 ratio transformer. The step-down transformers are generally Used to decrease the voltage at substations for the consumer's use and the step-up transformers are required to increase the voltage at the geoerating stations for transmission. The common voltages adopted for distribution are 1.1, 2.2, 3.3, 6.6 and 1) kV for urban area, 22,33 kV for short distance transmission and 66, 110, 132, 220 apd 440 kV for long-distance transmission. The efficiency of transformers ranges between 90 to 98 per cent, fransformers are named power transformets Or Distribution

71. What is working principle of transformer?

A. The working principle of a transformer is based on mutual electro magnetic induction. It means, whenever a changing flux links with a coil, an emf is induced in it which is Proportional to the rate of change of flux asd the Humber of turns in coils linking the flux

72. Draw transformer parts?

A.



73. What is synchronous Motors?

A. A synchronous motor is & machine which converts electrical energy into mechanical energy while rotating at a constant speed equal to synchronous speed. 'When a de generator is supplied with electrical energy, it runs aS a dc motor. Similarly an alternator can-also run as an Vind ee if ac supply is given to the armature Such nf and de supply to the field winding. toto" Of Motor is known as synchronous

74. What is difference between single phase and 3 phase Motors?

A 1-phase induction motor requires single-phase AC supply, whereas a 3-phase induction motor need a source of 3-phase AC supply for its operation.

1-phase induction motors produce low starting torque, whereas 3phase induction motors produce high starting torque.

75. What is an electric power supply system?

A. The system of generation, transmission and distribution of electrical power is called the electrical power supply system.

76. What is booster?

A. Booster is a low-voltage, high-current series wound dc generator inserted into a dc circuit to add or inject a certain voltage proportional to circuit current.

77. Why is DC used for HP transmission of electric power?

A. 'Theres alimit to distance over which power canbe transmitted | by ac sng overhead lines, this is because of urge impedance limitation producing high voltage atthe receiving end,That is why dc is used for HV transmission of electric power as an alternative.

78. What is difference between wire and cable?

A. Single wire, may be bare or covered with insulation is called the wire while several wires stranded together is called the cable.

79. Why conductor is covered with insulating material?

A. The conductor is covered with insulating material so as to prevent leakage of current from the conductor.

80. Why made by Earth continuity conductor?

A. The conductor, by means of which the metal body of an equipment. or an appliance is connected to the earth, is known as ez} continuity conductor (ECC). '

81. Why charcoal and salt is used in earthing?

A. Generally alternate layers of charcoal and salt are used to increase the effective area of the earth and to reduce the earth resistance respectively.

82. What is types of single phase Motors?

A. The single phase motors are classified as follows : (1) Split phase induction motor (2) Capacitor induction motor (4) Capacitor start motor (ii) Permanent capacitor motor (iii) Capacitor start capacitor run motor (3) Shaded pole type induction motor (4) Universal motor (5) Repulsion motor (i)) Repulsion start motor ' (ij) Repulsion start, repulsion run motor _ (ij) Repulsion induction motor ~ (iv) Slip ring induction motor.

83. What is losses in Dc generators?

A. A generator transforms mechanical energy electrical energy. The energy output of a generator should be theoretically equal to the energy input. Bul, some energy is always lost in the windings, cores etc. and the output energy is always lesser than the input energy. The factors which cause loss of energy ate as - follows : 1. Copper losses 2. Iron losses

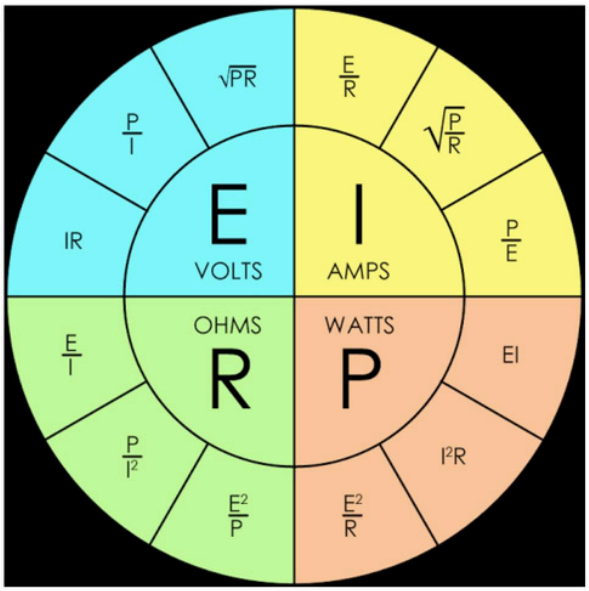
3. Mechanical losses

84. What is UPS?

A. An uninterruptible power supply (UPS) or battery/ flywheel backup, is an electrical apparatus that provides emergency power to a load when the input power source, typically mains power, fails. A UPS differs from an auxiliary or emergency power system or standby generator in that it provides near-instantaneous protection from input power interruptions, by supplying energy stored in batteries, supercapacitors, or flywheels. The runtime of most UPS isrelatively short, but sufficient to start a standby power source or properly shut down the protected equipment.

85. Electrical laws and formulas?

A.



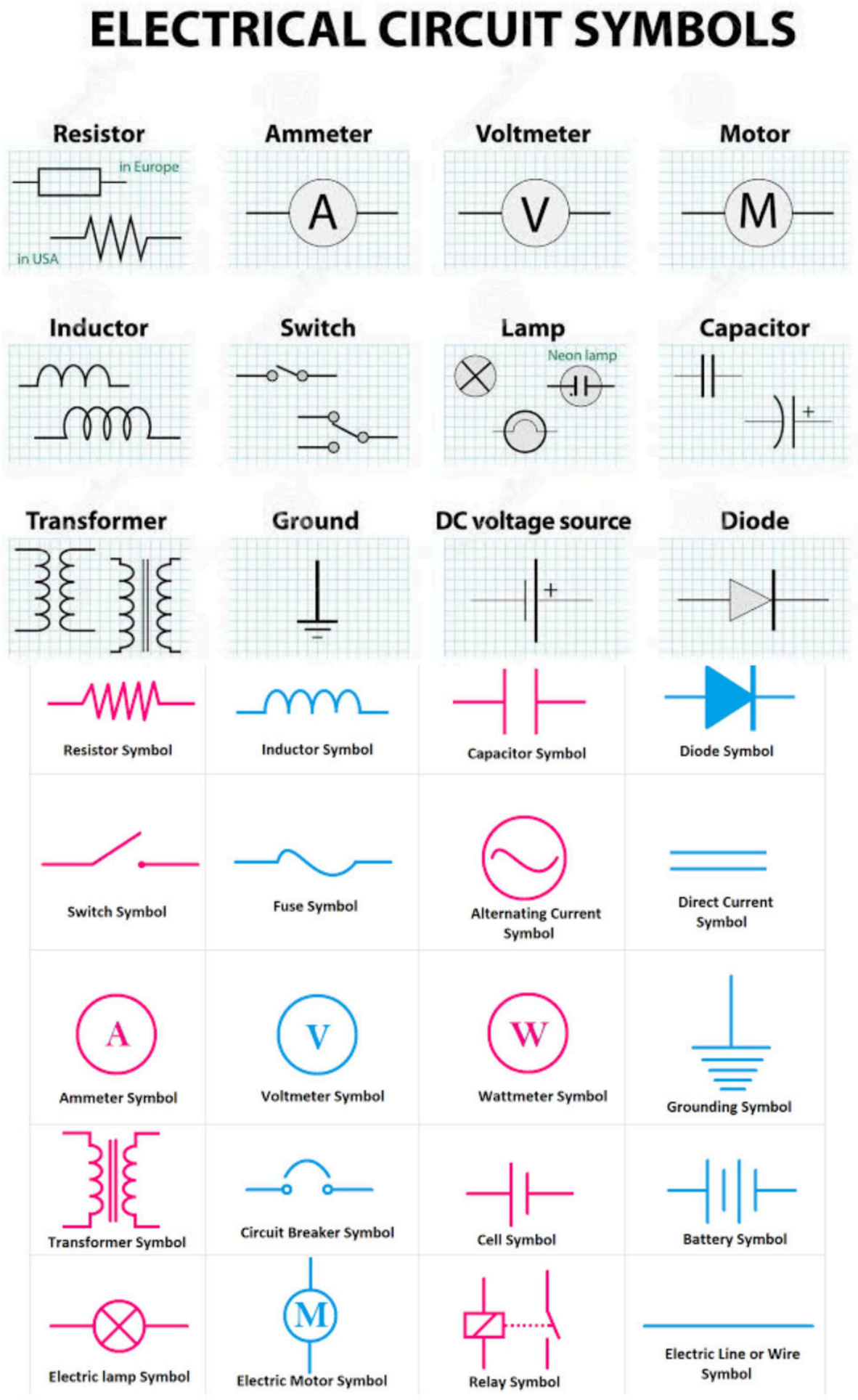
86. What is symbols for quantities and units?

A.

Quantity	Symbol	Unit	Abb
Capacitance	C	farad	F
Charge	Q, q	coulomb	C
Current	I	ampere	A
Energy	W	joule	J
Force	F	newton	N
Frequency	f	hertz	Hz
Inductance	L	henry	H
Magnetic flux	Φ	weber	Wb
Magnetic flux density	B	tesla	T
Power	P	watt	W
Resistance	R	ohm	Ω
Voltage	V,E	volt	V

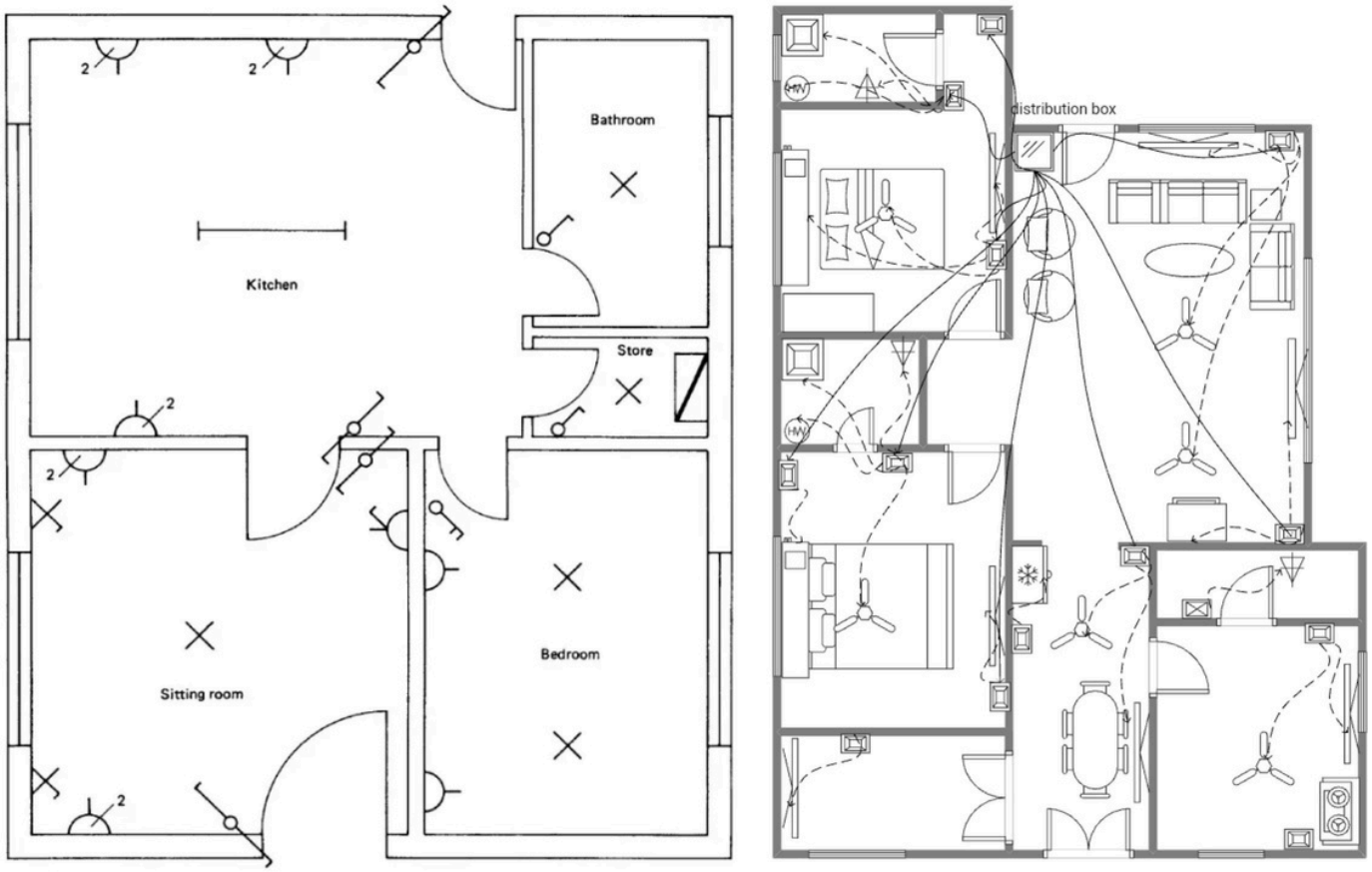
87. Electrical circuit symbols?

A.



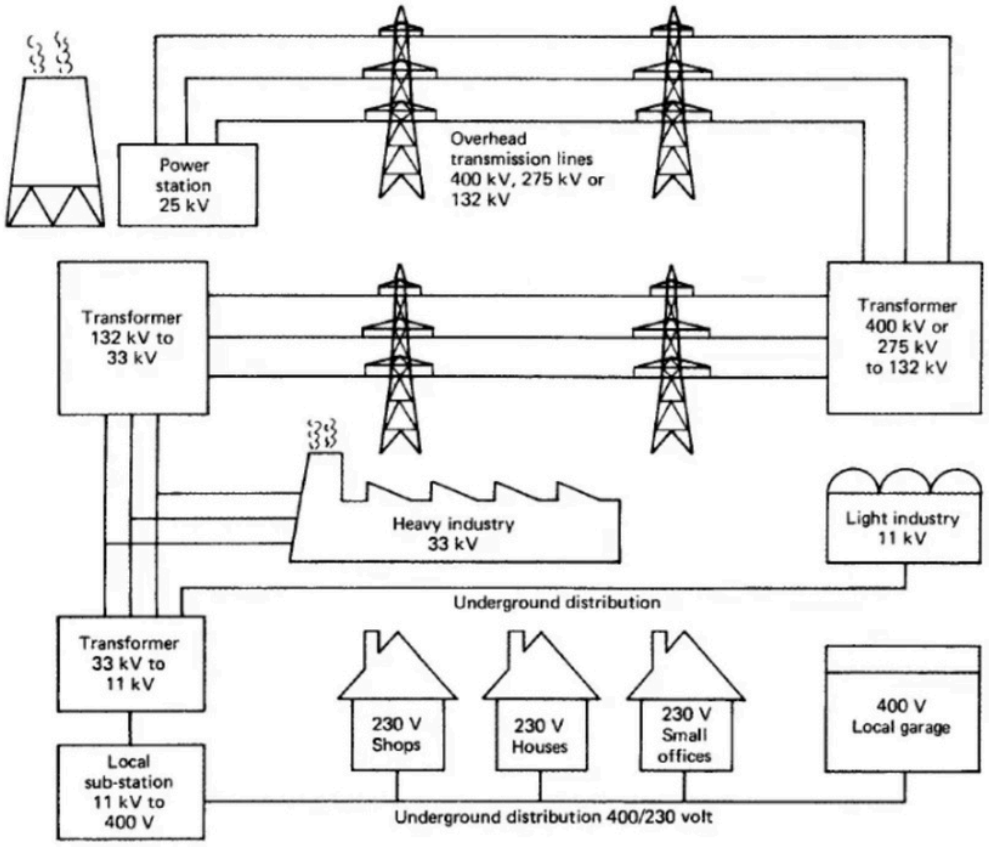
88. House wiring Daiagram?

A.



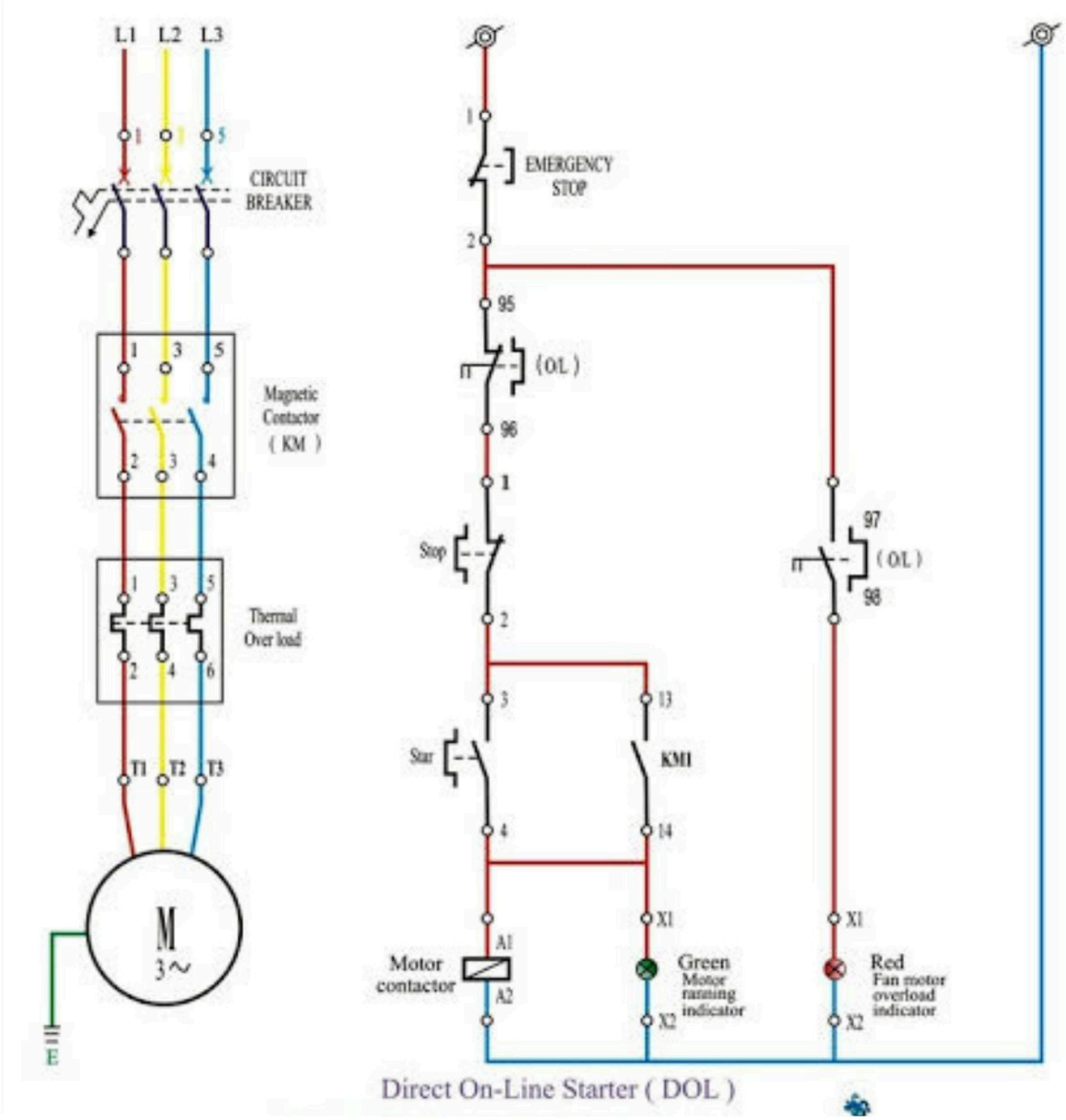
89. Power Transmission and distribution?

A.



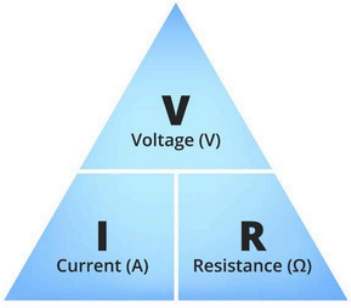
90. Draw the Dol stater power & Control Wiring?

A.



92. What is Ohm's law?

A. Ohm's Law is a formula used to calculate the relationship between voltage, current and resistance in an electrical circuit.



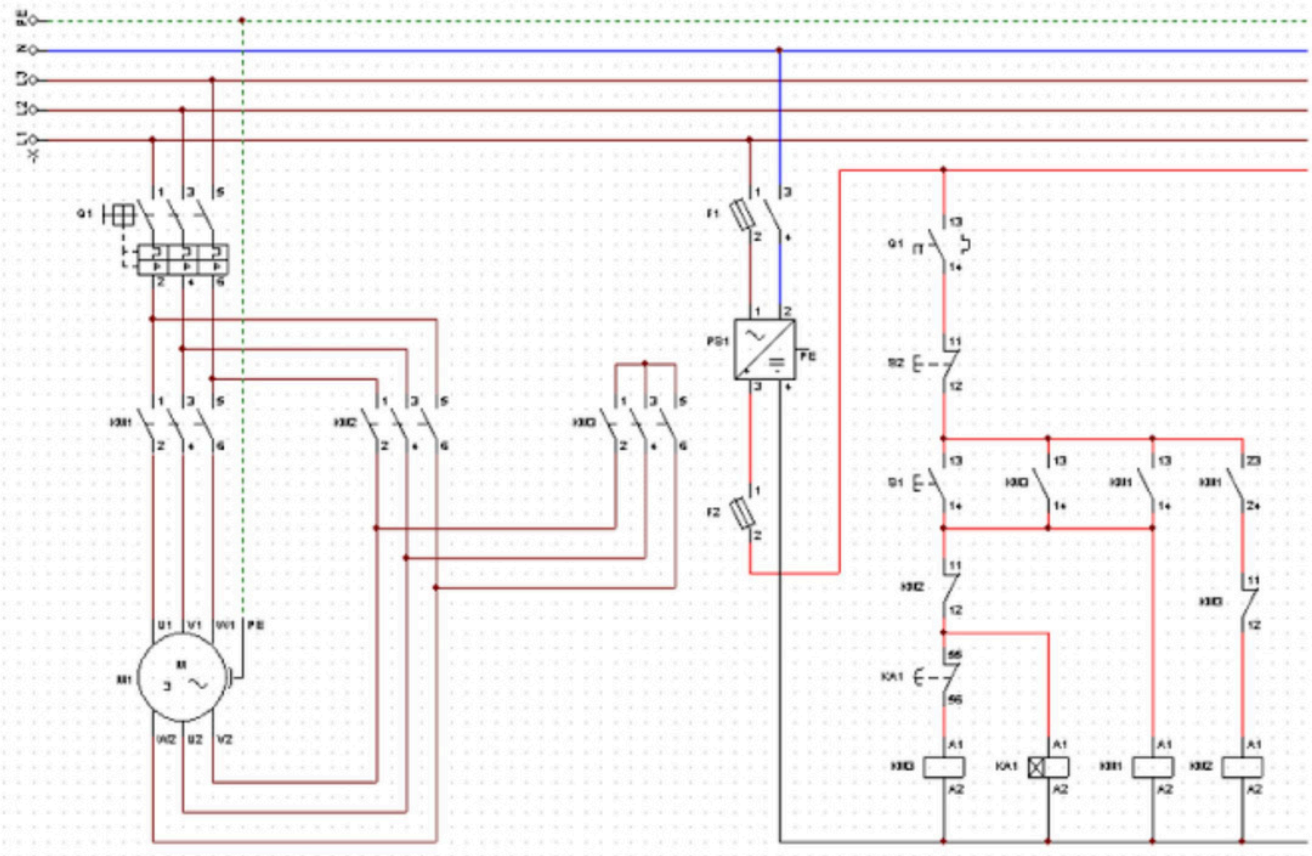
$V = I \cdot R$

$R = V : I$

$I = V : R$

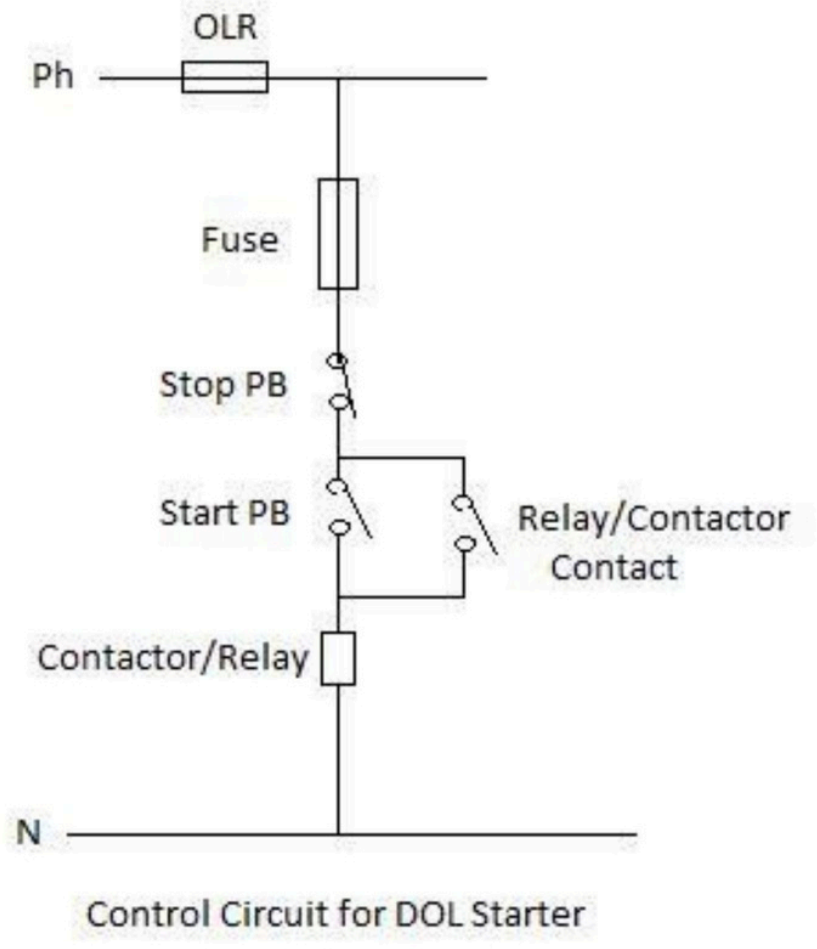
93. Draw the star dela starter power wiring and control wiring?

A.



94. Draw the DOL starter single line Daiagram?

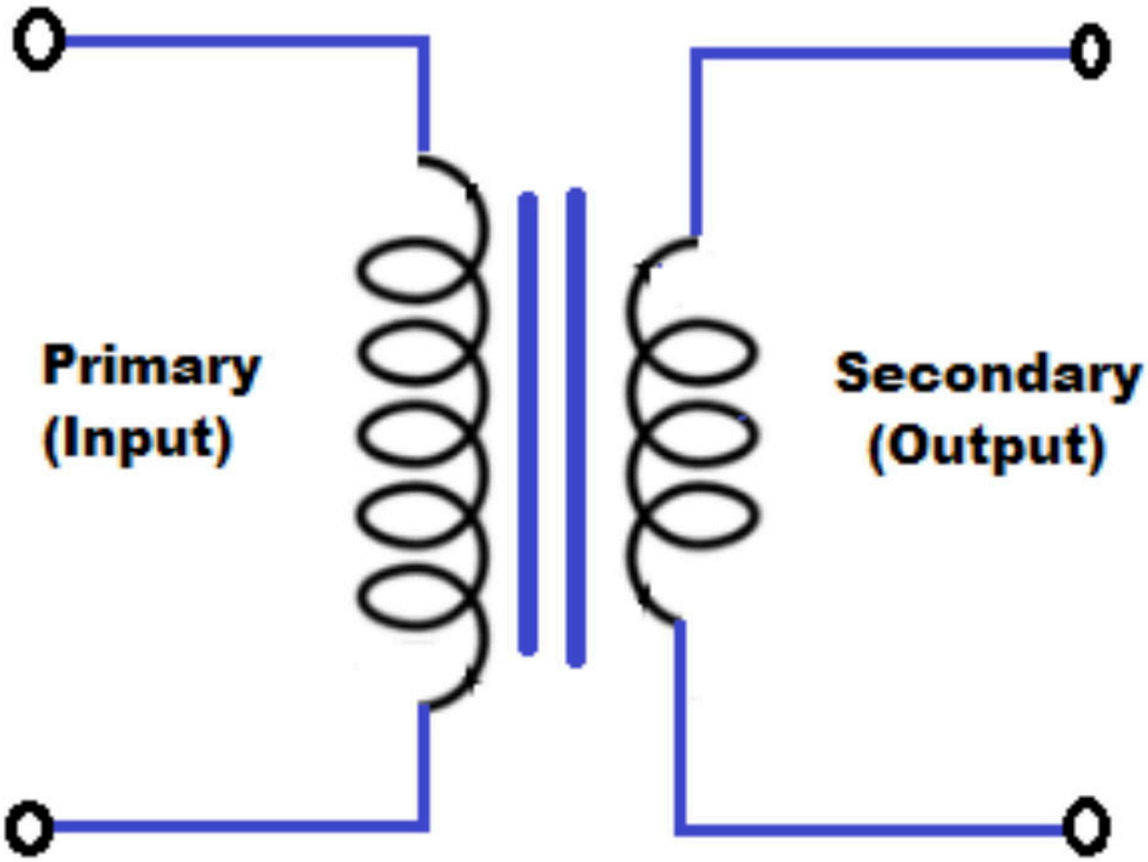
A.



Control Circuit for DOL Starter

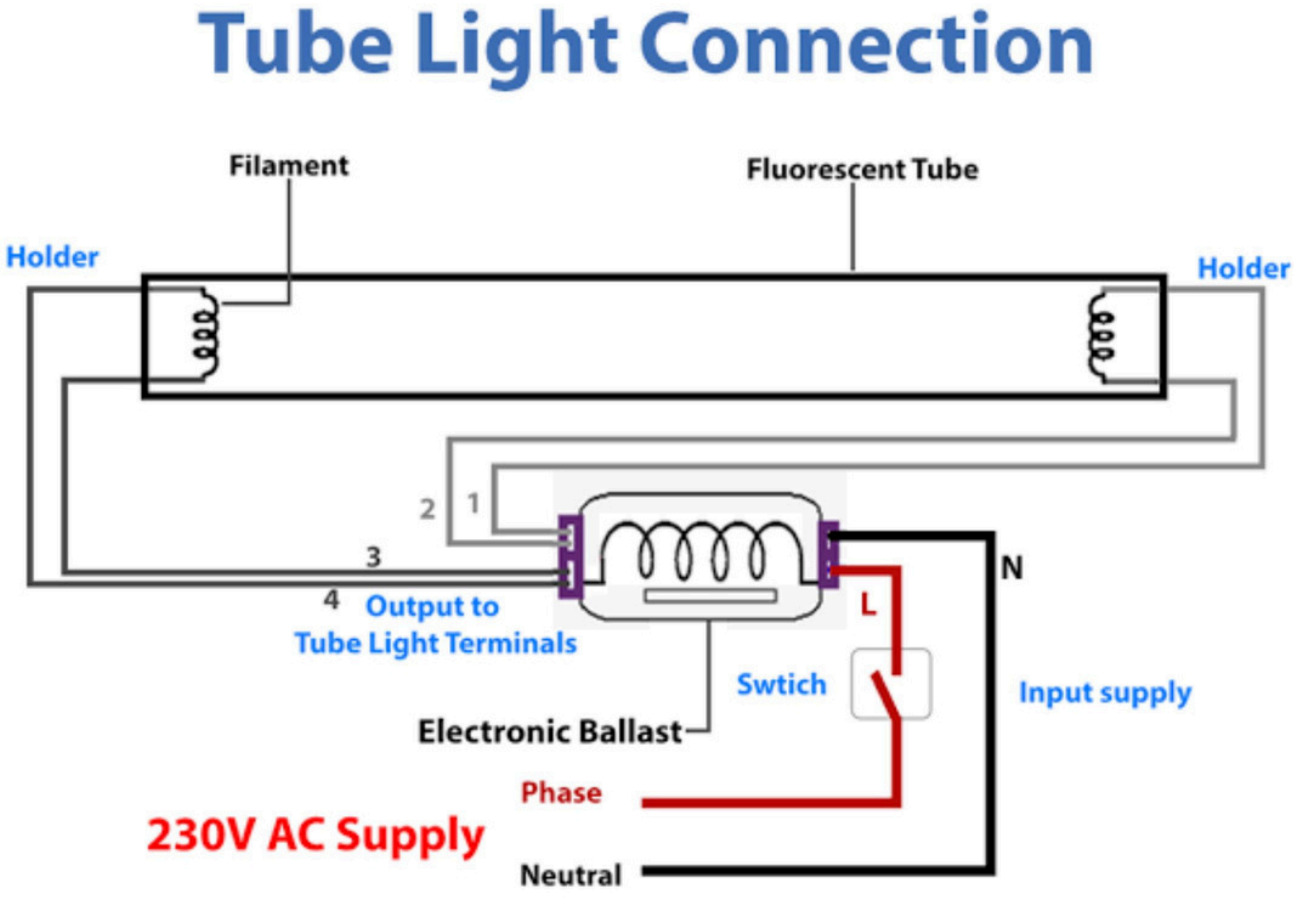
95. Draw the Trandformerprimary and secondary winding primary and secondary winding?

A.



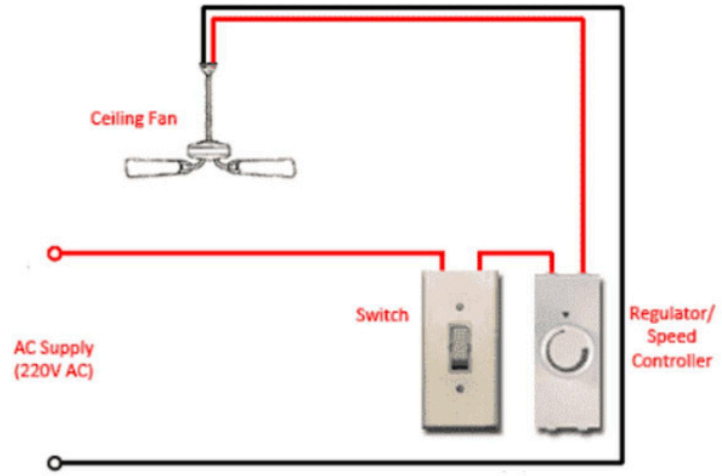
96. Draw the tubelight wiring diagram?

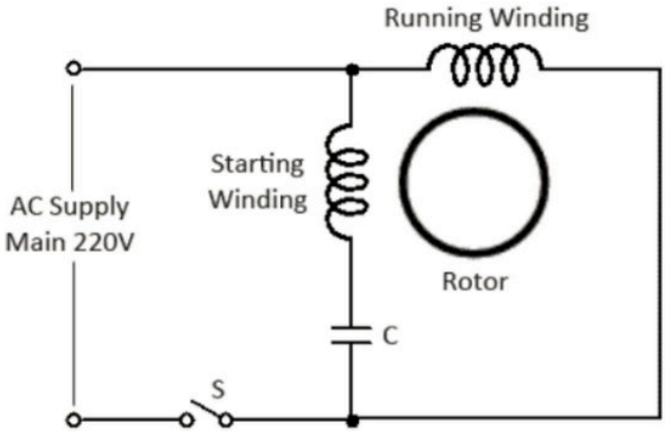
A.



98. Fan wiring Diagram?

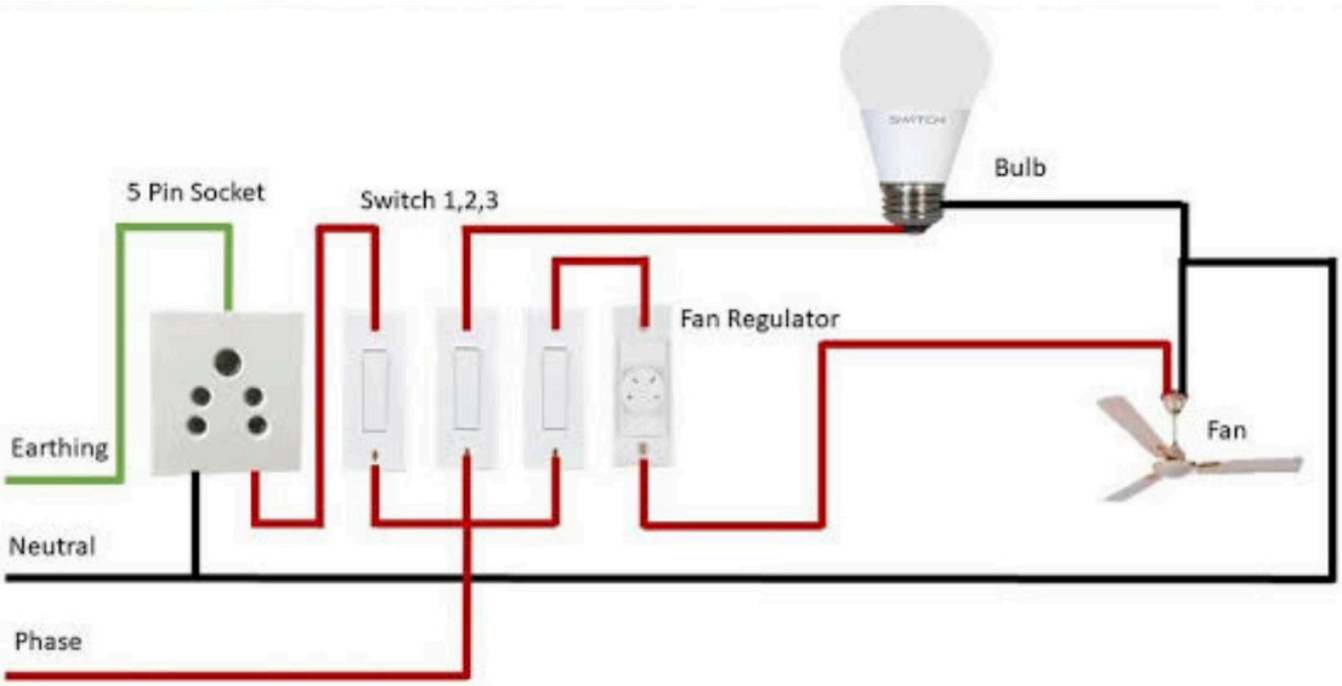
A.





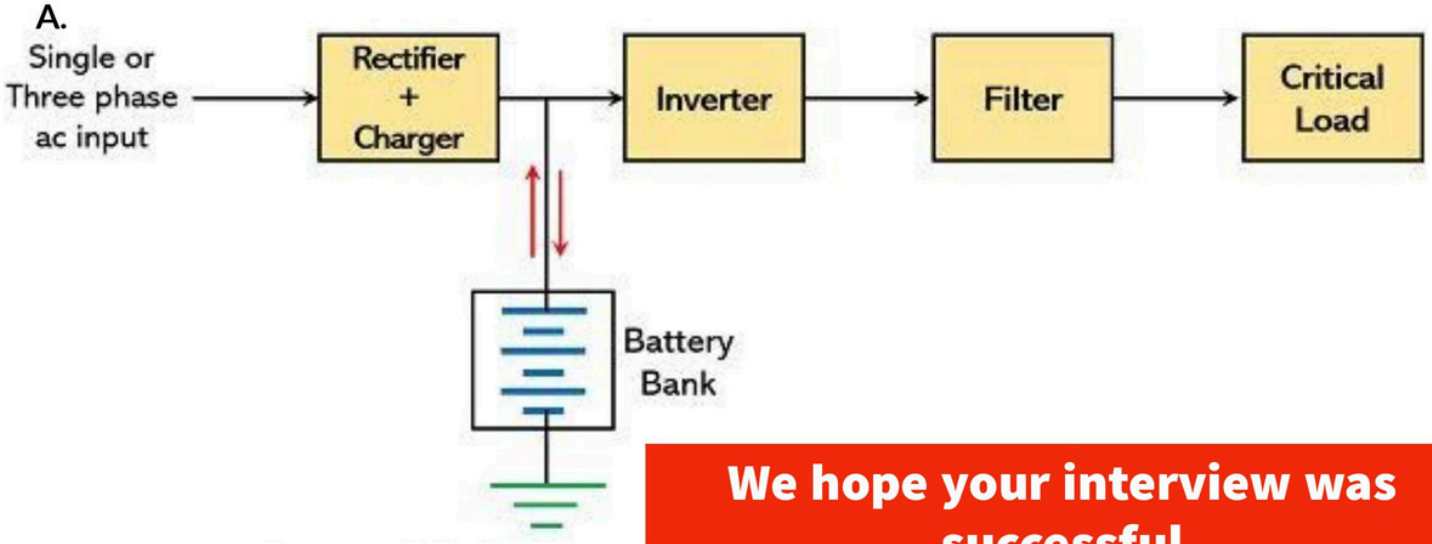
99. Switch Board Diagram?

A.



100. Ups Drawaing?

A.



We hope your interview was successful

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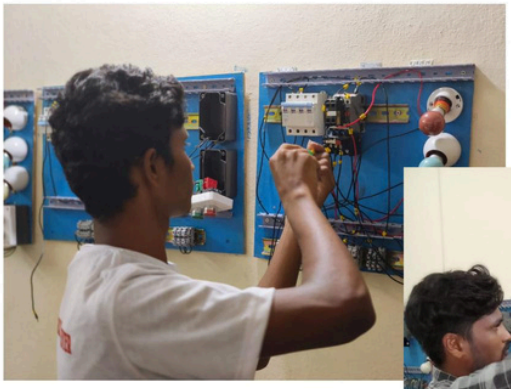


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Voltage measuring
Current
Resistance
Power


RAINBOW
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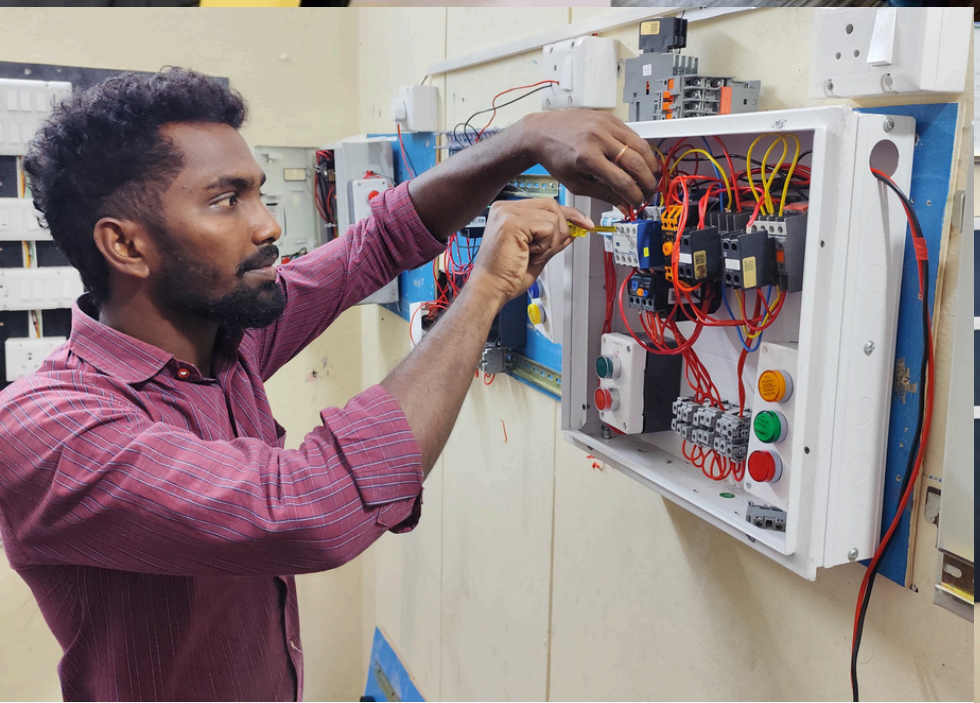

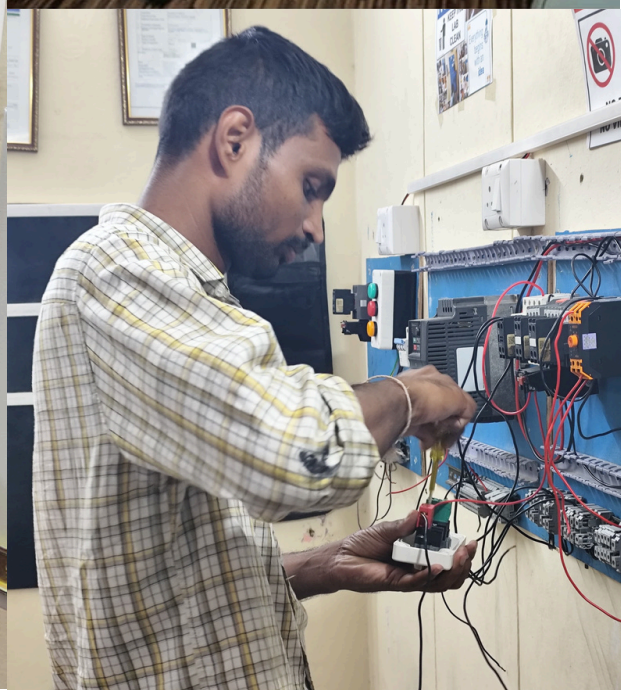

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B.Tech Students.	I T I students.	Diploma Students.	10th,Inter, Degree, Other..
Rs-20000/-	Rs-15000/-	Rs-15000/-	Rs-12000/-
100% Job Placement.	100% Job Placement.	100% Job Placement.	Only Practicals, No JobPlacement.
Tools, Electrical Pdf Material.	Tools, Electrical Pdf Material.	Tools, Electrical Pdf Material.	Tools

JOB Placement's & Salary's

B.Tech Students Salary's

Salary :- RS-18000/- To Rs-22000/-

I T I Students Salary's

Salary :- RS-16000/- To Rs-20000/-

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We teach all industrial practicals and give 100% Job placements in Software Company's, L & T Metro Station, Samshabad Airport, Pharma industries.

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We will join only 20No's per batch.

⚡Send all the below documents to us and get - your Student ID Number registered.

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- (SSC,B.Tech,ITI,Diploma Any)
  All Documents Xerox's.
- Aadhar Card Xerox
- 1Passport size Photo

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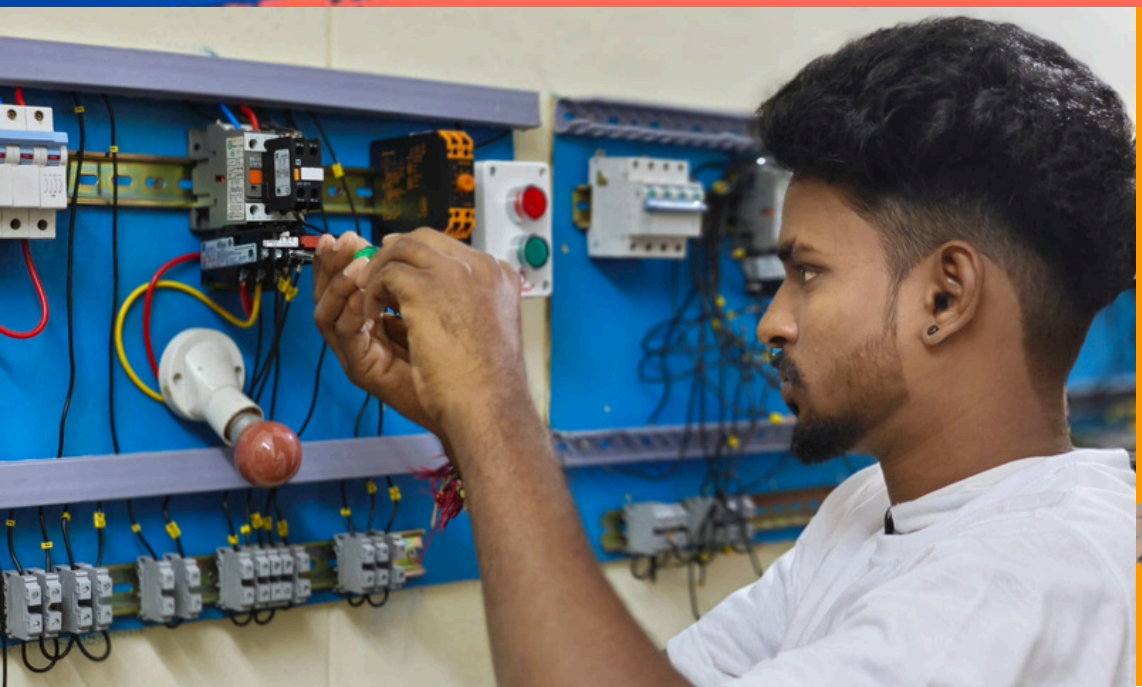


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