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Electric Mechanic Job Interview Preparation Guide.

Question #1

Tell us what is the effect of positive feedback on stability of the system?

Answer:-

Positive feedback is not used generally in the control system because it increases the error signal and drives the system to instability. But positive feedbacks are used in minor loop control systems to amplify certain internal signals and parameters

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Question # 2

Tell us what is SF6 Circuit Breaker?

Answer-

SF6 is Sulpher hexa Flouride gas.. if this gas is used as arc quenching medium in a Circuitbreaker means SF6 CB.

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Question #3

Suppose two bulbs of 100w and 40w respectively connected in series across a 230v supply which bulb will glow bright and why?

Answer:-

Since two bulbs are in series they will get equal amount of electrical current but as the supply voltage is constant across the bulb(P=V^2/R). So the resistance of 40W bulb is greater and voltage across 40W is more (V=IR) so 40W bulb will glow brighter.

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Question # 4

What is 2 phase motor?

Answer:-

A two phase motor is a motor with the the starting winding and the running winding have a phase split. e.g; ac servo motor. where the auxiliary winding and the control winding have a phase split of 90 degree.

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Question #5

Explain me what will happen when power factor is leading in distribution of power?

Answer:-

If their is high power factor, i.e if the power factor is close to one:

- * a) Losses in form of heat will be reduced,
- * b) Cable becomes less bulky and easy to carry, and very cheap to afford, &
- * c) It also reduces over heating of tranformers.

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Question # 6

Tell us are you confident in your ability to interpret any electrical diagram and repair most equipment in safe manner?

Answer:-

I am very confident in my ability to interpret electrical diagrams. This is one of my stronger suits in my current role and I have a lot of experience doing so. When it comes to repairing equipment, I always think of safety first. I have taken additional safety courses as well.

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Question # 7

Explain me what Are the Most Important Safety Concerns for Electricians?



Answer:-

Interviewers who ask this question want to see that you are safety-minded. They want to see that you have a good understanding of the risks associated with this type of work and get a sense of how concerned you are about safety in the way you approach your work

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Question #8

Why Should We Hire You as Electric Mechanic?

You'll find this question near the end of the interview. If you feel you have something special to offer that didn't get mentioned or prompted in the interview, then say it here. Avoid using cliched buzzwords like "hard-working," "fast learner" or "gets along well with others." Phrase your response in terms of what you can do for the employer, not how the job can benefit you. Use this question as your opportunity really to sell yourself to the hiring manager.

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Question #9

Tell us what has been your greatest achievement?

Answer:-

Reciting academic or obvious work achievements are not the best answers - they won't distinguish you from the crowd. Instead, say something that will set you apart, that speaks about your aspirations and values. Organising a sport or fund-raising event, taking part in a race, or learning and using a new language or musical instrument are good examples. I was nominated to be a representative to be go-between for our team and the senior management stakeholders', is another.

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Question # 10

Do you know what is a System?

Answer:-

When a number of elements or components are connected in a sequence to perform a specific function, the group of elements that all constitute a System

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Question #11

Tell me what is meant by knee point voltage?

Knee point voltage is calculated for electrical Current transformers and is very important factor to choose a CT. It is the voltage at which a CT gets saturated.(CT-current transformer).

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Question # 12

Tell me what is IDMT relay?

It is an inverse definite minimum time relay. In IDMT relay its operating is inversely proportional and also a characteristic of minimum time after which this relay operates.It is inverse in the sense, the tripping time will decrease as the magnitude of fault current increase.

Read More Answers.

Question #13

Tell me how many types of colling system it transformers?

Answer:-

- 1. ONAN (oil natural, air natural)
- ONAF (oil natural, air forced)
- 3. OFAF (oil forced,air forced)
- 4. ODWF (oil direct, water forced)
- 5. OFAN (oil forced, air forced)

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Question # 14

Tell me whats the one main difference between UPS & inverter? And electrical engineering & electronics engineering?

Uninterrupt power supply is mainly use for short time. means according to ups VA it gives backup. ups is also two types: on line and offline. online ups having high volt and amp for long time backup with with high dc voltage. but ups start with 12v dc with 7 amp. but inverter is startwith 12v, 24,dc to 36v dc and 120 amp to 180amp battery with long time backup.

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Question #15

Explain Do You Specialize in Any Particular Areas?

Along with qualifications, an employer will want to know if you have any particular specializations. For example, some electricians specialize in electrical systems and controls, wiring, or electro-mechanical repairs. Others may have particular expertise in reading blueprints or general troubleshooting.



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Question # 16

Tell us what Procedures Do You Follow Before Finalizing a Job?

Answer:

Details are critical to the work of electricians, so be prepared to describe to an interviewer what you do to make sure that everything is correct with a project before you are ready to sign off on it as complete. For example, explain how you verify that things are working and what steps you take to make sure that every detail is as it should be.

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Question # 17

Tell me of a few tools of the trade that you are comfortable with?

Answer.

Bench lathes, drills, coils, terminal boards and chassis are just some of the tools that I work well with.

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Question # 18

Tell us have you ever worked in a leadership role?

Answer:-

Recently, I was commissioned to train, mentor and guide a group of 5 apprentices, which is where I was able to prove my leadership abilities.

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Question #19

Explain About Your Work Experience?

Answer:-

Employers are looking for steady work employment and not short term assignments with big gaps between jobs. You should be prepared to explain any such gaps between work. Another piece of advice is to focus on work experience relevant to the position you are currently applying for as well as your most recent work history.

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Question # 20

Tell us why computer humming sound occurred in HT transmission line?

Answer:

This computer humming sound is coming due to ionization (breakdown of air into charged particles) of air around transmission conductor. This effect is called as Corona effect, and it is considered as power loss.

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Question # 21

Can you explain me the difference between a four point starter and three point starter?

Answer:-

The shunt connection in four point stater is provided separately form the line where as in three point stater it is connected with line which is the drawback in three point stater

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Question # 22

Tell us what is stepper motor.what is its uses?

Answer:-

Stepper motor is the electrical machine which act upon input pulse applied to it. it is one type of synchronous motor which runs in steps in either direction instead of running in complete cycle.so, in automation parts it is used.

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Question # 23

Explain me what is Holding current?

Answer:-

When scr is conducting current in forward conduction state, scr will return to forward blocking state when the anode current or forward current falls below a low level called Holding current

Note: Latching current and Holding current are not same. Latching current is associated with the turn on process of the scr whereas holding current is associated with the turn off process. In general holding current will be slightly lesser than the latching current.

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Question # 24

Can you explain me what is Control System?

Answer:-



In a System the output and inputs are interrelated in such a manner that the output quantity or variable is controlled by input quantity, then such a system is called Control System

The output quantity is called controlled variable or response and the input quantity is called command signal or excitation.

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Question # 25

Tell us why thyristor is considered as Charge controlled device?

Answer-

During the triggering process of the thyristor from forward blocking state to forward conduction state through the gate signal, by applying the gate signal (voltage between gate and cathode) increases the minority carrier density in the p-layer and thereby facilitate the reverse break over of the junction J2 and thyristor starts conducting. Higher the magnitude of the gate current pulse, lesser is the time required to inject the charge and turning on the scr. By controlling the amount of charge we can control the turning on time of the scr.

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Question # 26

Tell us what is the power factor of an alternator at no load?

Answer-

At no load Synchronous Impedance of the alternator is responsible for creating angle difference. So it should be zero lagging like inductor.

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Question # 27

Tell me why temperature rise is conducted in bus bars and isolators?

Answer:-

Bus bars and isolators are rated for continuous power flow, that means they carry heavy currents which rises their temperature. so it is necessary to test this devices for temperature rise.

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Question # 28

Explain me whats is MARX CIRCUIT?

Answer:

It is used with generators for charging a number of capacitor in parallel and discharging them in series. It is used when voltage required for testing is higher than the available.

Read More Answers

Question # 29

Why are you leaving your current job as Electric Mechanic?

Answer:-

The interviewer would like to know your motivation for leaving your current position. When discussing your current job be sure to stay in a positive mindset and keep the conversation light. There are many legitimate reasons for leaving a job. Be sure to be clear about your reasoning, and be honest. Stay away from any negative response! That is a complete interview killer.

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Question # 30

Tell us what Is the Most Challenging Project You Have Faced as an Electrician?

Answer:

Employers want to get a sense of what aspects of an electrician's job you might find to be challenging, as well as how you have responded in the past when facing such a situation. So, in addition to describing the situation, also provide details on how you handled the challenge and what you learned from it.

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Question # 31

Explain me as far as work safety is concerned, what precautions do you take?

Answer:

Working as an electronics technician means that one has to work around fumes and moving equipment parts, so one has to be careful. I make sure that I wear all assigned protective gear and follow safety instructions and protocols.

Read More Answers.

Question #32

Tell us what Types of Electrical Systems Have You Worked on in the Past?

Answer:

Be prepared to list the various types of electrical systems you have worked on in the past, giving specifics about the scope of each type of project and the role you played. If there are types of systems relevant to this job that you have not worked on before, explain how your past experience and training has prepared you to be ready to tackle these kinds of systems.

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Question # 33

Please explain what is rated speed?

At the time of motor taking normal current (rated current)the speed of the motor is called rated speed. It is a speed at which any system take small current and give maximum efficiency.

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Question #34

Tell us what is the principle of motor?

Whenever a current carrying conductor is placed in an magnetic field it produce turning or twisting movement is called as torque.

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Question # 35

Explain what are the transformer losses?

Answer:-

TRANSFORMER LOSSES - Transformer losses have two sources-copper loss and magnetic loss. Copper losses are caused by the resistance of the wire (I2R). Magnetic losses are caused by eddy currents and hysteresis in the core. Copper loss is a constant after the coil has been wound and therefore a measurable loss. Hysteresis loss is constant for a particular voltage and current. Eddy-current loss, however, is different for each frequency passed through the transformer.

20/100

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Question # 36

Can you tell me the methods for starting an induction motor?

Answer:-

The different methods of starting an induction motor:

- * a) DOL:direct online starter
- * b) Star delta starter
- * c) Auto transformer starter
- * d) Resistance starter
- * e) Series reactor starter

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Question # 37

Explain me what is Latching current?

Answer:-

Gate signal is to be applied to the thyristor to trigger the thyristor ON in safe mode. When the thyristor starts conducting the forward current above the minimum value, called Latching current, the gate signal which is applied to trigger the device in no longer require to keep the scr in ON position.

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Question #38

Tell us what are different types of Control Systems?

Answer:-

Two major types of Control Systems are

- 1) Open loop Control System
- 2) Closed Loop Control Systems
- * Open loop Control Systems:

The Open loop Control System is one in which the Output Quantity has no effect on the Input Quantity. No feedback is present from the output quantity to the input quantity for correction.

Closed Loop Control System:

The Closed loop Control System is one in which the feedback is provided from the Output quantity to the input quantity for the correction so as to maintain the desired output of the system.

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Question #39

Tell us what are the advantage of free wheeling diode in a Full Wave rectifier?

Answer:-

It reduces the harmonics and it also reduces sparking and arching across the mechanical switch so that it reduces the voltage spike seen in a inductive load.

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Question # 40

Tell me what is the difference between synchronous generator & asynchronous generator?

In simple, synchronous generator supply's both active and reactive power but asynchronous generator(induction generator) supply's only active power and observe reactive power for magnetizing. This type of generators are used in windmills.



Read More Answers.

Question #41

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Answer:-

In simple, synchronous generator supply's both active and reactive power but asynchronous generator(induction generator) supply's only active power and observe reactive power for magnetizing. This type of generators are used in windmills.

Read More Answers.

Question # 42

Tell us what skills do you possess that make you an excellent contender to work as an electronics technician with our company?

Answer:-

I possess fundamental knowledge of electrical and electronic systems, along with deep insight into handling installation, calibration and testing of components, equipment and units. In addition to this, I am great at basic schematic reading and possess exceptional troubleshooting and repairing abilities.

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Question # 43

Please explain what are the different losses that occur in thyristor while operating?

Answer:-

Different losses that occur are

- * a) Forward conduction losses during conduction of the thyristor
- * b) Loss due to leakage current during forward and reverse blocking.
- * c) Power loss at gate or Gate triggering loss.
- * d) Switching losses at turn-on and turn-off.

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Question # 44

Explain me what is the difference between isolators and electrical circuit breakers? What is bus-bar?

Answer-

Isolators are mainly for switching purpose under normal conditions but they cannot operate in fault conditions. Actually they used for isolating the CBs for maintenance. Whereas CB gets activated under fault conditions according to the fault detected. Bus bar is nothing but a junction where the power is getting distributed for independent loads.

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Question # 45

As you know there are a Transformer and an induction machine. Those two have the same supply. For which device the load current will be maximum? And why?

Answer:-

The motor has max load current compare to that of transformer because the motor consumes real power.. and the transformer is only producing the working flux and its not consuming.. hence the load current in the transformer is because of core loss so it is minimum.

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Question #46

Tell us as an electronics technician, what have been your work responsibilities in the past?

Answer:-

I have been actively involved in laying out, building, testing, troubleshooting, repairing and modifying developmental and production electronic components and parts. Additionally, I have been responsible for adjusting, calibrating, aligning and modifying circuitry and components, and recording effects on unit performances. Also, I was responsible for writing technical reports and developing charts and graphs to illustrate assigned systems' operating characteristics and deviations.

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Question # 47

Please explain why Delta Star Transformers are used for Lighting Loads?

Answer:

For lighting loads, neutral conductor is must and hence the secondary must be star winding. and this lighting load is always unbalanced in all three phases. To minimize the current unbalance in the primary we use delta winding in the primary. So delta / star transformer is used for lighting loads.

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Question # 48

Tell me what is ferrantic effect?

Answer:

Output voltage is greater than the input voltage or receiving end voltage is greater than the sending end voltage.

Read More Answers.

Question # 49



Tell me what is the full form of KVAR?

Answer:

We know there are three types of power in Electricals as Active, apparent & reactive. So KVAR is stand for ``Kilo Volt Amps with Reactive component.

Read More Answers

Question #50

Explain what is the one skill that you have to offer that you are really proud of?

Answer-

I am great with troubleshooting. Since a large part of my work is to handle and fix problems with electronic equipment, this skills comes in handy at a great level.

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Question # 51

Tell me where should the lighting arrestor be placed in distribution lines?

Answer:-

Near distribution transformers and out going feeders of 11kv and incomming feeder of 33kv and near power transformers in sub-stations.

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Question # 52

Tell us what is meant by armature reaction?

Answer-

The effect of armature flu to main flux is called armature reaction. The armature flux may support main flux or opposes main flux.

Read More Answers.

Question #53

Tell me what is ACSR cable and where we use it?

Answer:-

ACSR means Aluminium conductor steel reinforced, this conductor is used in transmission & distribution.

Read More Answers.

Question # 54

Tell me what Do You See as the Most Critical Skills for Electricians?

Answer:

The goal of asking this type of question is to see if you have a clear understanding of what it takes to work successfully as an electrician. In addition to listing the skills, give examples that illustrate you possess them and apply them in your work.

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Question #55

Tell me why the capacitors works on ac only?

Answer:-

Generally capacitor gives infinite resistance to dc components(i.e., block the dc components). it allows the ac components to pass through.

Read More Answers.

Question # 56

Please explain what is the function of anti-pumping in circuit breaker?

Answer:-

When breaker is close at one time by close push button, the anti pumping contactor prevent re close the breaker by close push button after if it already close.

Read More Answers.

Question # 57

Can you explain me what is a feedback in Control System?

Answer:

The Feedback in Control System in one in which the output is sampled and proportional signal is fed back to the input for automatic correction of the error (any change in desired output) for futher processing to get back the desired output.

Read More Answers.

Question # 58

Do you know what is reverse power relay?

Answer:

Reverse Power flow relay are used in generating stations's protection. A generating stations is supposed to fed power to the grid and in case generating units are off,there is no generation in the plant then plant may take power from grid. To stop the flow of power from grid to generator we use reverse power relay.



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Question # 59

Explain me why Negative Feedback is preffered in the Control System?

Answer:-

The role of Feedback in control system is to take the sampled output back to the input and compare output signal with input signal for error (deviation from the desired result)

Negative Feedback results in the better stability of the system and rejects any disturbance signals and is less sensitive to the parameter variations. Hence in control systems negative feedback is considered.

Read More Answers.

Question # 60

Tell us what are the advantages of speed control using thyristor?

Answer:-

Advantages:

- * 1. Fast Switching Characterstics than Mosfet, BJT, IGBT
- 2. Low cost
- * 3. Higher Accurate.

Read More Answers.

Question #61

Tell us how Would Your Past Boss or Coworkers Describe You?

Answer:-

Interviewers who ask this question want to get a sense of your thoughts on how people you have worked with in the past view you as a team member. Be prepared to list and describe a few of your key traits from the perspective of someone who has spent time working side-by-side with you. Include items specific to your job capabilities as well as your approach to work, such as whether you are a team player or prefer working independently and if you are hard-working, loyal and tenacious when it comes to solving problems.

Read More Answers.

Question # 62

Do you know what Is the Difference Between a Breaker and a Fuse?

Answer:-

Interviewers sometimes ask about what might seem like very basic knowledge to weed out people who lack the foundational knowledge necessary to succeed in the job. Be prepared to explain key concepts relevant to the work of an electrician to demonstrate that you have an understanding of the work and what it involves. If you happen to get asked a question that you don't know the answer to, you still might be fine if you can explain to the interviewer how you would approach finding the answer if faced with a need to know the information in the field.

Read More Answers.

Question # 63

Explain me about your electrical related on-the-job training?

Answer:-

I received extensive on-the-job training in my first position right out of university. I had a powerful mentor who allowed me to work by his side every day for six months. The most valuable lesson I learned during this on the job training was the blueprint and schematic reading and analysis.

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Question # 64

Explain me what is meant by insulation voltage in cables? explain it?

Answer:

It is the property of a cable by virtue of it can withstand the applied voltage without rupturing it is known as insulation level of the cable.

Read More Answers.

Question #65

Tell us what Qualifies You to Work as an Electrician?

Answer-

Employers will want to know if you have the right skills and credentials to work as a professional electrician. Mention any relevant certifications, licenses and education, as well as any experience from previous jobs that specifically pertain to an electrician's job.

Read More Answers.

Question # 66

What Are Your Salary Expectations as Electric Mechanic?

Answer:-

Be prepared to quote a realistic salary expectation for the position that you are applying for. Use your knowledge about the profession and the company to make a request that meets your needs while also being reasonable.



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Question # 67

Explain me what will happen if DC supply is given on the primary of a transformer?

Answer:-

Mainly transformer has high inductance and low resistance. In case of DC supply there is no inductance only resistance will act in the electrical circuit. So high electrical current will flow through primary side of the transformer. So for this reason coil and insulation will burn out.

Read More Answers.

Question # 68

Please explain what is the difference between MCB & MCCB, Where it can be used?

Answer:-

MCB is miniature circuit breaker which is thermal operated and use for short circuit protection in small current rating circuit. MCCB moulded case circuit breaker and is thermal operated for over load current and magnetic operation for instant trip in short circuit condition.under voltage and under frequency may be inbuilt. Normally it is used where normal current is more than 100A.

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Question # 69

Tell us why Are You Interested in the Electrical Trade?

Answer:-

If you are new to the electrical trade or are applying for an apprenticeship, you will probably be asked this question. Employers ask this question because they want to hear about your motivations and goals so that can be sure that you really have an interest in the field.

Read More Answers.

Question # 70

Do you know operation carried out in Thermal power stations?

Answer-

The water is obtained in the boiler and the coal is burnt so that steam is obtained this steam is allowed to hit the turbine, the turbine which is coupled with the generator generates the electricity.

Read More Answers.

Question #71

Tell us what is Automatic Voltage regulator(AVR)?

Answer:-

AVR is an abbreviation for Automatic Voltage Regulator. It is important part in Synchronous Generators, it controls theoutput voltage of the generator by controlling its excitation current. Thus it can control the output Reactive Power of the Generator.

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Question # 72

Suppose if one lamp connects between two phases it will glow or not?

Answer:-

If the voltage between the two phase is equal to the lamp voltage then the lamp will glow. When the voltage difference is big it will damage the lamp and when the difference is smaller the lamp will glow depending on the type of lamp.

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Question # 73

Tell us what are the advantages of star-delta starter with induction motor?

Answer:-

- (1). The main advantage of using the star delta starter is reduction of current during the starting of the motor. Starting current is reduced to 3-4 times Of current of Direct online starting.
- (2). Hence the starting current is reduced, the voltage drops during the starting of motor in systems are reduced.

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Question # 74

Tell us why Are You Interested in This Particular Type of Work?

Answer:-

Depending on the type of job you are interviewing for (industrial, residential or commercial), you might be asked why you are interested in that aspect of the field and not others. Be prepared to explain why you are seeking the particular type of position the interview is for.

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Technical Most Popular Interview Topics.

- 1: Instrumentation Frequently Asked Interview Questions and Answers Guide.
- 2: Data Entry Operator Frequently Asked Interview Questions and Answers Guide.
- 3 : <u>CCTV Operator Frequently Asked Interview Questions and Answers Guide.</u>
- 4: Elevator Technician Frequently Asked Interview Questions and Answers Guide.
- 5 : Generator Operator Frequently Asked Interview Questions and Answers Guide.
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