

Chapter 1 : + TOP ELECTRICAL ENGINEERING Interview Questions & Answers

Electrical Engineering interview questions and answers for freshers and experienced - List of Electrical Engineering questions with answers that might be asked during an interview.

What are your key skills? I am eager to learn and develop my skills, I have a tendency to grasp new knowledge and I am hard working. Question 12 of 28 What products have you designed which have entered high volume production? Question 13 of 28 For an kw generator, only 50kw of load is connected. User-Submitted Answers Generator gives the power according to load, so the generator generates only 50kw. User-Submitted Answers Latching comparator, successive approximation adc. Question 15 of 28 If not into production, how far did you follow the design and why did not you see it into production? Question 16 of 28 What is the voltage drop for kw motor if the length of the cable is m and what is the cable size? Question 17 of 28 What is the purpose of calculating knee point voltage for Current transformers? Cgs stands for centimeter, gram and second. It is not the standard system while mks stands for meter , kilogram and second. It is the standard system. Question 19 of 28 What work have you done on full chip Clock and Power distribution? What process technology and budgets were used? What work have you done on full chip Clock and Power distribution? Question 20 of 28 What configuration did you employ in your IO design? User-Submitted Answers I have not designed any ios. What were their size? What tools did you use? Question 23 of 28 What is the reason of power development in synchronous generator due to saliency? Question 24 of 28 Why are you interested in industrial as apposed to residential? Describe the specific codes you had to adhere to. Question 26 of 28 Describe your experience with using switch mode topologies such as PWM techniques, current sharing, power factor correction, zero volt switching, etc. What techniques did you use most effectively? Question 27 of 28 Have you read from front to back, the NEC code book? Question 28 of 28 Are you willing to travel? About Electrical Engineer September 8th, Electrical engineers are responsible for designing, developing and testing electrical systems and their components. As part of their tasks, electrical engineers conduct research programs, study customer requirements and perform quality checks of electrical systems and electrical products. It requires advanced education to become an electrical engineer. These experts must have thorough knowledge of engineering and technology, computers and electronics, and mathematics. They must also have strong critical thinking, troubleshooting, decision making, and problem-solving skills. Most employers will require all applicants to have some firsthand work experience. Doing an apprenticeship will help you get the required experience and will also help you understand exactly what this role involves. The interviewer will ask you questions to gauge your knowledge of the job. They will also want to know some more about your short and long term career goals. To see more questions that are typically asked at electrical engineer interviews, go to Mock Questions. Rehearsing your answers to the questions listed there will help you to be better prepared for your upcoming interview. All interview questions are created by MockQuestions.

Firstly I would like to say thank you for all your great calendrierdelascience.com I really need to know basically electrical engineering interview questions. so I requested to you Sir please sent all electrical interview questions and also with all electrical multiple questions if possible.

Why star delta starter is preferred with induction motor? Star delta starter is preferred with induction motor due to following reasons: State the difference between generator and alternator Generator and alternator are two devices, which converts mechanical energy into electrical energy. Both have the same principle of electromagnetic induction, the only difference is that their construction. Generator persists stationary magnetic field and rotating conductor which rolls on the armature with slip rings and brushes riding against each other, hence it converts the induced emf into dc current for external load whereas an alternator has a stationary armature and rotating magnetic field for high voltages but for low voltage output rotating armature and stationary magnetic field is used. Why AC systems are preferred over DC systems? Due to following reasons, AC systems are preferred over DC systems: It is easy to maintain and change the voltage of AC electricity for transmission and distribution. Plant cost for AC transmission circuit breakers, transformers etc is much lower than the equivalent DC transmission c. When a large fault occurs in a network, it is easier to interrupt in an AC system, as the sine wave current will naturally tend to zero at some point making the current easier to interrupt. How can you relate power engineering with electrical engineering? Power engineering is a sub division of electrical engineering. It deals with generation, transmission and distribution of energy in electrical form. Design of all power equipments also comes under power engineering. Power engineers may work on the design and maintenance of the power grid i. What are the various kind of cables used for transmission? Cables, which are used for transmitting power, can be categorized in three forms: Why back emf used for a dc motor? The induced emf developed when the rotating conductors of the armature between the poles of magnet, in a DC motor, cut the magnetic flux, opposes the current flowing through the conductor, when the armature rotates, is called back emf. Its value depends upon the speed of rotation of the armature conductors. In starting, the value of back emf is zero. What is slip in an induction motor? Slip can be defined as the difference between the flux speed N_s and the rotor speed N . Speed of the rotor of an induction motor is always less than its synchronous speed. Explain the application of storage batteries. Storage batteries are used for various purposes, some of the applications are mentioned below:

Chapter 3 : Electrical Engineering interview questions and answers - part 2

Electrical Engineer Interview Questions 7 Electrical Engineer Interview Questions and Answers Whether you are preparing to interview a candidate or applying for a job, review our list of top Electrical Engineer interview questions and answers.

When two positively charged material place together it will repel. Electron in the outer orbit is known as valence. It is the amount of charge that is stored inside a capacitor at a given voltage. It is defined as the property of a coil to resist any changes in electric current flowing through it. Mutual inductance happens when a secondary coil opposes current change in the primary coil. Both generator and alternator work on the same principle they convert mechanical energy into electrical energy. It converts induced emf Electro Motive Force into direct current, where it based on stationary magnetic field and revolving conductor which rolls on the armatures with slip rings and brushes riding against each other. It has rotating magnetic and stationary armature for high voltage and stationary magnetic field and a rotating armature for low voltage

5 Mention what are the different kind of cables used for transmissions? Cables are categorized into three forms according to its thermal capacity Low tension cables- transmits voltage upto volts High tension cables- transmits voltage up to volts Super tension cables- transmits voltage up to 66kv to kv

6 Mention what are the different colors on wires indicates? This is a must know question for any good Electrical Engineer

Black wire: This wire is used for power supply in all circuits. Any circuits with this color is considered hot or live. It is never used for a neutral or ground wire. This color wire is a secondary live wire in a volt circuit and used in some types of interconnection. You can join the red wire to another red wire or to a black wire

Blue and Yellow wire: These wires are also used to carry power but are not wiring the outlets for common plug-in electrical devices. They are used for the live wire pulled through the conduct. You will see yellow wire in the fan, structure lights, and switched outlets. This color wire is used as a neutral wire. It carries the current unbalanced load to the ground. You can join white and gray only to other white and gray wires

Green: It is connected to the grounding terminal in an outlet box and run from the outlet box to the ground bus bar within an electric panel

7 Explain RLC circuit? An RLC circuit carries an electrical circuit consisting of a resistor R and inductor L and a capacitor C , connected in parallel or series. This circuit is called a second order circuit as any voltage or current in the circuit can be described by a second order differential equation. Wire is sized by American Wire Gauge system. Your installation of conductors will depend on a few factors like gauge of the wire, wire capacity, etc. For wires, smaller the wire gauge larger the ampacity or capacity of the wire to handle current. For example, low voltage lighting and lamp cords will have 18 gauge, electric furnaces or large electric heaters are of 6 gauge. There are two types of semi-conductors intrinsic and extrinsic. Again in extrinsic semi-conductors you will have N-type semiconductors and P-type semiconductors. Transistors are comprised of several combination of n-type and p-type semi-conductors. Transistor has the ability to amplify the current, due to the reason that output power can be higher than the input power. If the resistance total in a series circuit doubles the current will reduce to half. If the series current gets double then, the resistance is halved. When a string of resistors in a series will divide the source voltage into proportion to their values. Reverse polarity is referred in a condition where one or more of your receptacles are connected incorrectly. To fix the reverse polarity, check the wire connection at the outlet and inspect your receptacle. A receptacle with reverse polarity will have the white wire screwed to the hot side and the black wire will be connected to the neutral side, if that the case swap the wires and it will resolves the problem. If it persists, a licensed electrician will be needed. A rectifier is an electrical device that transforms A. C , which flows in only one direction. The types of rectifiers are Half wave rectifier: It uses one p-n junction Full wave rectifier: It uses two p-n junction

18 Explain what is Zener diode? Zener diode is a type of seme-conductor diode that allows current to flow in the opposite direction when exposed to enough voltage. During signal conversion, amount of information is lost Digital circuits anticipate high flexibility

20 Explain what is laser diodes? Laser diodes are compact transistor like packages with two or more electrical leads. Lasing occurs when stimulated emission results into the amplification of photon confined to the lasing mode. These photons hit back and forth between the back and

front mirror, and hence a diverging beam emits from the laser diode packages.

Chapter 4 : Prepare for These 7 Electrical Engineering Interview Questions and Get Your Dream Job

Given the highly intelligent and competitive nature of electrical engineering, expect a tough interview process. Although many of the questions will test your technical skills, it is also important to be prepared to respond to inquiries about other aspects of your character that will impact your probability of success as an employee.

Interested candidates must go through the entire election process and Interview is one of most important part of any job selection. Apart from having a degree, one needs to prepare well in order to qualify the interviews. Here on this page, we have tabulated Electrical Engineering Interview Questions with Answers for fresher as well as non-fresher candidates. Right from the inception of electricity and its distributive branches, the discipline of EEE has seen disruptive changes while adapting itself to the rapidly changing technologies. Experts see it as a microcosm of all things electrical and electronic, without which there would have been literal darkness all over the face of the earth. Alongside the major branches of engineering, the discipline of EEE holds a significant importance in heralding the greatness of the science of engineering as a whole. For the layman, the branch of Electronic and Electrical Engineering EEE can be defined as the branch of engineering that is associated with the study and applications of electricity, electronics and electromagnetism. Each and every equipment around you function based on the principles of this science. Its uses run the gamut from the early telegraph and telephone to the highly advanced robotic machinery and artificial intelligence based programming. It is because of the advancements and inventions in this field, that we are able to enjoy the luxuries of today at a nominal price. To describe the specific impact of each technology on the various equipment around us, it becomes a bit complicated. All the electronic devices around us and the electrical machinery use a combination of different principles and concepts to function. But to be specific in a differentiating sense, the entire branch can be sub divided based on the specific area they cater to such as-Digital computers, Control Systems, Telecommunications, Power engineering, RF Radio Frequency Engineering, Signal Processing, Microelectronics and Instrumentation to name a few. Each of these branches holds its own importance and relevance to the subject as a whole in its own unique way. It is no ordinary task as such to be able to win over the interviewer without any technical knowledge about the subject of interest. Most of the companies that look to employ electrical engineers, be it corporate firms or large public sector establishments look for a crystal clear understanding of the science in a potential employee. To be able to meet this criteria, a student must be able to impress the interviewer with his strong grasp over the concepts and principles. To help a student achieve this level, it is recommended that he be thorough with every concept concerning the most critical and important subjects by going through the topics under question repeatedly. The previous Interview questions will largely help a student to get a clear idea of the level and difficulty of the questions and will also help him in identifying the important topics. Referring to these important interview questions will not only serve as a morale booster but will also be quite instrumental in judging his level of preparedness for the interview. The containing questions will surely boost the knowledge and will also give the confidence to the candidates which is quite essential for the aspirants. And thus we assure you that these Questions will surely help you getting you dream job and Cracking the interview. If you have any questions regarding this, You can write to us y leaving a Comment below and Share your Experiences with us by Commenting.

Chapter 5 : 28 Electrical Engineer Interview Questions | MockQuestions

Electrical engineering jobs are lucrative, competitive positions for some of the brightest minds out there. Companies that hire electrical engineers are hiring for the future of their company.

Are you ready for the real world? Yes, studying electrical engineering is hard. Because guess what, life after studying may be even more challenging. Can you compete with your peers? If you have any doubts, this article is for you. Most employers are looking for the same things. So make sure you give it to them. Learn about seven important types of electrical engineering interview questions , prepare your answers and impress your new employer at your next interview. Yes, in certain scenarios electrical engineering is a practical career. But you need theory to back your designs, decisions, and actions. And your interviewer will make sure you have the necessary knowledge, especially about math theory. Saying you found everything easy may sound like a lie. Admit areas of difficulty and then focus on aspects you know you excel in. An interview is about showing your best, but also being authentic. Your past projects will show them: Advertisement Do You Have a Specialty? You must help your new employer reach his or her business goals. Does your natural interest align with what the company does? Are You a Computer Expert? No engineering project functions without a computer these days. If these characteristics apply to you, you may be their favorite candidate: But familiarize yourself with trends, such as Calculatoredge or E3 Series. Practical Questions Are you good at talking about engineering , or only writing about it? In addition, taking your time to answer shows you consider questions in depth and that you can stay calm under pressure. Did you know interviewers can learn so much through only one question? Advertisement Testing Your Knowledge Interviewers will also challenge your knowledge in terms of current technical norms in the market. Can you list the most common cable types for power transmission? And you have to explain each one: Ensure you give all the details to show your composure and affinity to detail. Do You Know or Understand? Will you be able to do the work? They need you to understand the facts so you can apply it in your new post. One easy way of testing this is asking you to state a theorem by only using one sentence. You have to cover different power sources, cables and the effect multiple cable systems will have on voltage. Advertisement How well do you know your theory , and do you understand it too? Your interviews will uncover the truth. You can see that most questions the interviewers will fire at you will be tests. They want individuals who can handle the pressure and benefit the working environment. Are you their best candidate for ? A little preparation may provide you with a calm demeanor so you can show them the best version of yourself.

Chapter 6 : 20 Electrical Engineering Interview Questions & Answers

Common Interview Questions General. Tell me about yourself. Walk me through your résumé. What is it about XYZ Corporation that attracted you? Describe what is it about the position that prompted you to apply.

Series reactor starter What is the difference between earth resistance and earth electrode resistance? Only one of the terminals is evident in the earth resistance. In order to find the second terminal we should recourse to its definition: Earth Resistance is the resistance existing between the electrically accessible part of a buried electrode and another point of the earth, which is far away. The resistance of the electrode has the following components: A the resistance of the metal and that of the connection to it. B the contact resistance of the surrounding earth to the electrode. Explain What is use of lockout relay in ht voltage? A lock-out relay is generally placed in line before or after the e-stop switch so the power can be shut off at one central location. This relay is powered by the same electrical source as the control power and is operated by a key lock switch. The relay itself may have up to 24 contact points within the unit itself. This allows the control power for multiple machines to be locked out by the turn of a single key switch. What is the power factor of an alternator at no load? At no load Synchronous Impedance of the alternator is responsible for creating angle difference. So it should be zero lagging like inductor. Explain How to determine capacitor tolerance codes? In electronic circuits, the capacitor tolerance can be determined by a code that appears on the casing. The code is a letter that often follows a three-digit number such as Z. The first two are the 1st and 2nd significant digits and the third is a multiplier code. Most of the time the last digit tells you how many zeros to write after the first two digits and these are read as Pico-Farads. The reason that 4mA is chosen instead of 0 mA is for fail safe operation. For example- a pressure instrument gives output 4mA to indicate 0 psi, up to 20 mA to indicate psi, or full scale. Due to any problem in instrument i. So if range is mA then we can differentiate whether it is due to broken wire or due to 0 psi. Two bulbs of w and 40w respectively connected in series across a v supply which bulb will glow bright and why? 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. What is reverse power relay? 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. What will happen if DC supply is given on the primary of a transformer? Mainly transformer has high inductance and low resistance. So high electrical current will flow through primary side of the transformer. So for this reason coil and insulation will burn out. 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. What are the advantage of free wheeling diode in a Full Wave rectifier? It reduces the harmonics and it also reduces sparking and arcing across the mechanical switch so that it reduces the voltage spike seen in a inductive load What is the function of interposing current transformer? The main function of an interposing current transformer is to balance the currents supplied to the relay where there would otherwise be an imbalance due to the ratios of the main current transformers. Interposing current transformer are equipped with a wide range of taps that can be selected by the user to achieve the balance required. What are Motor Generator Sets and explain the different ways the motor generator set can be used? Motor Generator Sets are a combination of an electrical generator and an engine mounted together to form a single piece of equipment. Motor generator set is also referred to as a genset, or more commonly, a generator. The motor generator set can used in the following different ways: Define what is power quality meter? Power Quality meters are common in many industrial environment. Small units are now available for home use as well. They give operators the ability to monitor the both perturbations on the power supply, as well as power used within a building, or by a single machine or appliance. In some situations, equipment function and operation is monitored and controlled from a remote location where communication is via modem, or highspeed communication lines. So we can understand the importance of power measurement through power quality

meters. What is the different between digital phase converter and ordinary phase converter? Digital phase converter are a recent development in phase converter technology that utilizes proprietary software in a powerful microprocessor to control solid state power switching components. This microprocessor, called a digital signal processor DSP , monitors the phase conversion process, continually adjusting the input and output modules of the converter to maintain perfectly balanced three-phase power under all load conditions. Explain the operation of variable frequency transformer? A variable frequency transformer is used to transmit electricity between two asynchronous alternating current domains. A variable frequency transformer is a doubly-fed electric machine resembling a vertical shaft hydroelectric generator with a three-phase wound rotor, connected by slip rings to one external ac power circuit. A direct-current torque motor is mounted on the same shaft. Changing the direction of torque applied to the shaft changes the direction of power flow; with no applied torque, the shaft rotates due to the difference in frequency between the networks connected to the rotor and stator. The variable frequency transformer behaves as a continuously adjustable phase-shifting transformer. It allows control of the power flow between two networks. What is the main use of rotary phase converter? Rotary phase converter will be converting single phase power into true balanced 3 phase power,so it is often called as single phase to three phase converter. Often the advantages of 3 phase motors, and other 3 phase equipment, make it worthwhile to convert single phase to 3 phase so that small and large consumers need not want to pay for the extra cost of a 3 phase service but may still wish to use 3 phase equipment. Use of switch mode power converter in real-time basis? Switch mode power converter can be used in the following 5 different ways step down an unregulated dc input voltage to produce a regulated dc output voltage using a circuit known as Buck Converter or Step-Down SMPS, step up an unregulated dc input voltage to produce a regulated dc output voltage using a circuit known as Boost Converter or Step-Up SMPS, step up or step down an unregulated dc input voltage to produce a regulated dc output voltage, invert the input dc voltage using usually a circuit such as the Cuk converter, and produce multiple dc outputs using a circuit such as the fly-back converter. Which type of oil is used as a transformer oil? Transformer oil, or insulating oil, is usually a highly-refined mineral oil that is stable at high temperatures and has excellent electrical insulating properties. It is used in oil filled transformers, some types of high voltage capacitors, fluorescent lamp ballasts, and some types of high voltage switches and circuit breakers. Its functions are to insulate, suppress corona and arcing, and to serve as a coolant. Well into the s, polychlorinated biphenyls PCB s were often used as a dielectric fluid since they are not flammable. They are toxic, and under incomplete combustion, can form highly toxic products such as furan. Starting in the early s, concerns about the toxicity of PCBs have led to their banning in many countries. Today, non-toxic, stable silicon-based or fluoridated hydrocarbons are used, where the added expense of a fireresistant liquid offsets additional building cost for a transformer vault. Combustion-resistant vegetable oil-based dielectric coolants and synthetic pentaerythritol tetra fatty acid C7, C8 esters are also becoming increasingly common as alternatives to naphthenic mineral oil. Esters are non-toxic to aquatic life, readily biodegradable, and have a lower volatility and higher flash points than mineral oil. If we give A, V on Primary side of 1. Mcb specification are done on maximum current flow in circuit. What is the full form of KVAR? Excitation is applying an external voltage to DC shunt coil in DC motors. In three pin plug 6 Amp. Because Current flow in the conductor is inversely proportional to the conductor diameter. So if any short circuits occur in the system first high currents bypassed in the Earthling terminal. Difference between megger test equipment and contact resistance meter test instruments? Megger test equipment used to measure cable electric resistance, conductor continuity, phase identification where as contact resistance meter test instruments used to measure low resistance like relays ,contactors. When we connect the large capacitor bank in series? So in order to bring the voltage at the load terminals within its limits i. What is electrical diversity factor in electrical installations? Electrical diversity factor is the ratio of the sum of the individual maximum demands of the various subdivisions of a system, or part of a system, to the maximum demand of the whole system, or part of the system, under consideration. Electrical diversity factor is usually more than one. Why field rheostat is kept in minimum position while armature rheostat at maximum position? In motors at the time of starting the armature resistance is introduced to reduce the high starting current and the field resistance is kept minimum to have high starting torque. Why computer humming

sound occurred in HT transmission line? 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.

Chapter 7 : 30 electrical engineering interview questions and answers - freshers, experienced

Electrical & Electronics Interview Questions & Answers. Basic Electrical & Electronics Engineering and Technology Interview Questions & Answers.

Electrical Engineer Interview Questions 7 Electrical Engineer Interview Questions and Answers Whether you are preparing to interview a candidate or applying for a job, review our list of top Electrical Engineer interview questions and answers. Tweet When and where did you get your electrical engineering degree s , and in what classes did you excel? While not always the case, how a candidate performed while attaining a degree or a doctorate is generally a good indication of how they will perform on the job. What to look for in an answer: Discussion of math classes Theory and method classes Upper-level classes Example: I also did well in linear algebra, and I am most proud of the grade I earned in convex optimization. Were you the project lead or subject matter expert? The answer to this question will help you determine how complex a project the candidate can be trusted to lead or assist with. Spectrum of responsibilities People tasked to oversee Project components given responsibility for Example: My team was responsible for calculating voltage and current requirements, temperature variable factors, power requisites and remote GSM communication needs. As much as any other question, this one will help you determine how well a candidate will fit into the structure of your company. Nomenclature pertaining to specific electrical engineering Project specifics for individual disciplines Explanations of crossover work and projects that provided solutions for a variety of electrical engineering practices Example: Though I do not have a great deal of experience as a microelectronics engineer, I have made a hobby of gaining an understanding of the theoretical concepts behind the field. As almost all electrical engineering requires an understanding of at least one software platform. This question helps you determine how quickly a candidate can get up to speed with respect to the software your company typically uses. Familiarity with more than one type of software Understanding of the basic tenants common to all electrical engineering software Depth of familiarity with software Example: I also have experience with E3. While an understanding of electrical engineering software is essential, more important is an understanding of the concepts and theories behind electrical engineering practices. Whether the candidate seems engaged in the idea of answering the question If the candidate gives thought to a purposeful answer Whether the candidate takes their time to give the question consideration Example: Alternating current is a circuit. While alternating current is most common, because of the safety factor, direct current also has its advantages including longer travel distances, more power with less loss, and it is less expensive. Another question that determines a candidates fundamental understanding of the concepts and theories of electrical engineering. While not a difficult question to understand, knowing the basics of voltage is critical. An understanding of voltage capacities An understanding of cable sizes An understanding of the voltage volumes that differentiate high from low Example: With respect to capacity, there are three types: Cable that carries less than 1, volts is low tension; between 1, and 23, volts is high tension; and anything between 66 kV to kV is super tension. Multiple versus solitary power sources Systems with one versus multiple cables The effects of multiple cable systems on voltage Example:

Chapter 8 : Electrical Engineering Questions and Answers

Electrical Engineering questions and answers with explanation for interview, competitive examination and entrance test. Fully solved examples with detailed answer description, explanation are given and it would be easy to understand.

Chapter 9 : Electrical Engineering Interview Questions | calendrierdelascience.com

- 1) What happens when two positively charged material is placed together? When two positively charged material place together it will repel.
- 2) What is referred to the electron in the outer orbit? Electron in the outer orbit is known as valence.
- 3) Define the term Capacitance and Inductance.