

EEEM IMPORTANT QUESTIONS

- Q Define Conductors.
- Q Name two low resistivity materials.
- Q Name materials used for making fuses.
- Q Word two applications of Copper.
- Q Define surface resistance.
- Q Name any four insulating materials.
- Q What is superconductivity?
- Q Write four active components?
- Q Which materials are used in transformer for different parts?
- Q What is curie temperature?
- Q Which material is used in bulb filament?
- Q What is a p type material?
- Q Write two industrial applications of GOLD.
- Q Which insulating material is using for covering of electrical wires?
- Q Define Retentivity.
- Q What are alloys?
- Q Name various gaseous materials.
- Q What is thermosetting material?

- Q Classify materials on the bases of energy bands and atomic structure.
- Q Explain factors affecting the resistivity of materials.
- Q Distinguish between low resistivity and high resistivity materials.
- Q What are semiconductors? Explain their properties.
- Q Write down properties of Mica & Glass.
- Q List a few applications of Paper & Rubber.
- Q Explain concept of eddy current and hysteresis loss.
- Q Give mechanical properties of hard and annealed aluminum.
- Q Explain different types of materials.
- Q Explain the construction of carbon compound resistors.
- Q Define Plastics give its classifications with applications.
- Q What is a thermocouple? Explain its working.
- Q Give applications of ceramic materials.
- Q Explain semiconductor materials used in manufacture of various semiconductor device.
- Q Write short note on Bimetals& Soft ferrites.

- Q. Give classification of magnetic materials and explain their properties.
- Q. Explain physical, thermal and electrical properties of insulating materials.
- Q How hysteresis loop is formed. Discuss coercive force and residual magnetism.
- Q .Discuss various engineering materials used in fabrication of electrical machines.
- Q. Discuss various alloys used is engineering.

Basic Electronics-I

EXPLAIN BRIEFLY

- Q Passive components.
- Q Constant current source.
- Q Atomic structure.
- Q Intrinsic semiconductor.
- Q Doping.
- Q PN junction.
- Q Junction capacitance.
- Q Half wave rectifier.
- Q Filter circuit.
- Q Rectifier efficiency.
- Q Varactor diode.
- Q PNP transistor.
- Q Transistor biasing.
- Q h- parameters.
- Q DC load line.
- Q Decibel gain.
- Q Multistage amplifier.
- Q FET.
- Q What are different types of electronic components?
- Q Explain the graphic representation of current and voltage sources.
- Q Explain the effect of temperature on intrinsic and extrinsic semiconductors.
- Q Explain Silicon vs. Germanium for mobility and conductivity.
- Q What is the concept of junction capacitance in forward biased conditions in diode?
- Q Explain half wave rectifier using diodes.
- Q Explain the working characteristics photo diode.
- Q Draw input/output characteristics of common emitter (CE) transistor configuration.
- Q What is the effect of temperature on the operating point of a transistor?
- Q What is need of transistor biasing?
- Q Explain the phase reversal in single stage transistor amplifier.
- Q Write calculation of voltage gain using AC equivalent circuit of single stage transistor amplifier.
- Q What are applications of multi stage amplifier?
- Q What are applications of transformer coupled amplifier?
- Q Comparison between JFET and MOSFET
- Q What is a filter circuit? What are different types of filter circuit? Explain them.
- Q Draw and explain input/output characteristics of common base (CB) transistor configurations.
- Q What are different types of transistor biasing circuit? Explain them.
- Q Draw and explain working of direct coupled amplifier.
- Q Explain construction and operation of a p- channel JFET.

Electrical & Electronics / Measurements & Instrumentation

Very Short Answer type questions.

- Q. What do you mean by errors ?
- Q Name two types of moving Iron instruments.
- Q Watt meter measures active / reactive power (T/F)
- Q What do you mean by maximum demand indicator
- Q What is meggar.
- Q What do you mean by instrument transformer.
- Q What is CRO ?
- Q Name the bridge used to measure inductance.
- Q $K_w = K_{va} \times \cos \phi$ (True / False)
- Q What is thermo couple.
- Q Multimeter can measure _____
- Q Range of ammeter can be extended by using _____
- Q A CRO is used to observe frequency of signal. (T/F)
- Q Resistance of earthing electrode is low (True/ False)
- Q What is the function of LCR meters.
- Q What is RTD.
- Q What is V.T. V.M
- Q What is relation of phase current and line current in case star connections.

Short answer type questions.

- Q Give classification of instruments as per their functions.
- Q Explain with diag. How can you extend range of ammeter
- Q List the errors take place in dynamo- meter type watt meter
- Q What is creeping error of energy meter and how it is avoided.
- Q Draw single phase dynamometer type power factor meter.
- Q List classification of current transformer as per construction
- Q Draw a circuit diagram showing use of ammeter voltmeter and watt meter.
- Q What are the specifications of digital multimeter.
- Q What are the major applications of CRO
- Q What are LCR meters ? Discuss their applications.
- Q Explain in brief function of earth tester.
- Q Give difference between star and delta connection.
- Q What are the basic requirements of a conductor material to be used in RTD
- Q Explain absolute and secondary instruments.
- Q What do you mean by low, medium and high resistance.

Long answer type questions.

- Q Draw block of diag of CRO. Also explain function of each block in detail.
- Q Explain construction, working principle of meggar. Also state its use.
- Q What do you mean by moving iron instruments. Explain with diag. The attraction type moving iron instrument.
- Q Explain two watt meter method to measure power in three phase unbalanced load.
- Q Explain construction, working of a LVDT with neat sketch.

COMPUTER PROGRAMMING AND APPLICATIONS

- Q Define low level language.
- Q Define Assembly language.
- Q Define Flow chart.
- Q Define ASCII.
- Q What is a source program?
- Q What is bit?
- Q What is a variable?
- Q An _____ in general is a symbol that operates on a certain data type.
- Q Functions in C pass all arguments by value. (True/False)
- Q What is meant by looping?
- Q What is multi- dimensional array?
- Q A _____ is a variable that represents the location (rather than the value) of a data item, such as a variable or an array element.
- Q What is a union?
- Q What is PSPICE?
- Q In terms of declaration syntax, union is similar to _____.
- Q Strings are array of characters i.e. they are characters arranged one after another in memory. (True/False)
- Q What is meant by opening a data files?
- Q Name two different types of data files.

Short answer type questions

- Q. Explain what do you understand by Machine language?
- Q Explain the concept of Interpreter.
- Q Name and describe the four basic data types in C.
- Q)What is meant by associativity?
- Q Describe the four relational operators included in C.
- Q How are library functions usually packaged with in a C compiler?
- Q Explain what do you understand by PSIM Software.
- Q What is the purpose of a buffer area when working with a stream oriented data file?
- Q How are one dimensional arrays defined?
- Q How is pointer variable declared? What is the purpose of the data types included in the declaration.
- Q What is structure? How does a structure differ from an array?
- Q How is an array of structure initialized?
- Q How is a union member accessed? How can a union member be processed?
- Q State several advantages to the use of function.
- Q Explain the difference between function declaration and a function definition.

Long answer type questions.

- Q Explain for loop and break statement.
- Q Discuss the software applications in Electrical Engineering.
- Q Write a program that accepts a string and an integer and print the string as many times as the value of the integer. This procedure should continue until the user presses q to quit.
- Q Suppose a function receives a pointer as an argument. Explain how this function is declared with in its calling function. In particular explain how the data type of the pointer argument is represented?
- Q Write short note on any two:-

a.Pointer

b.High Level
language

c.Logical operator

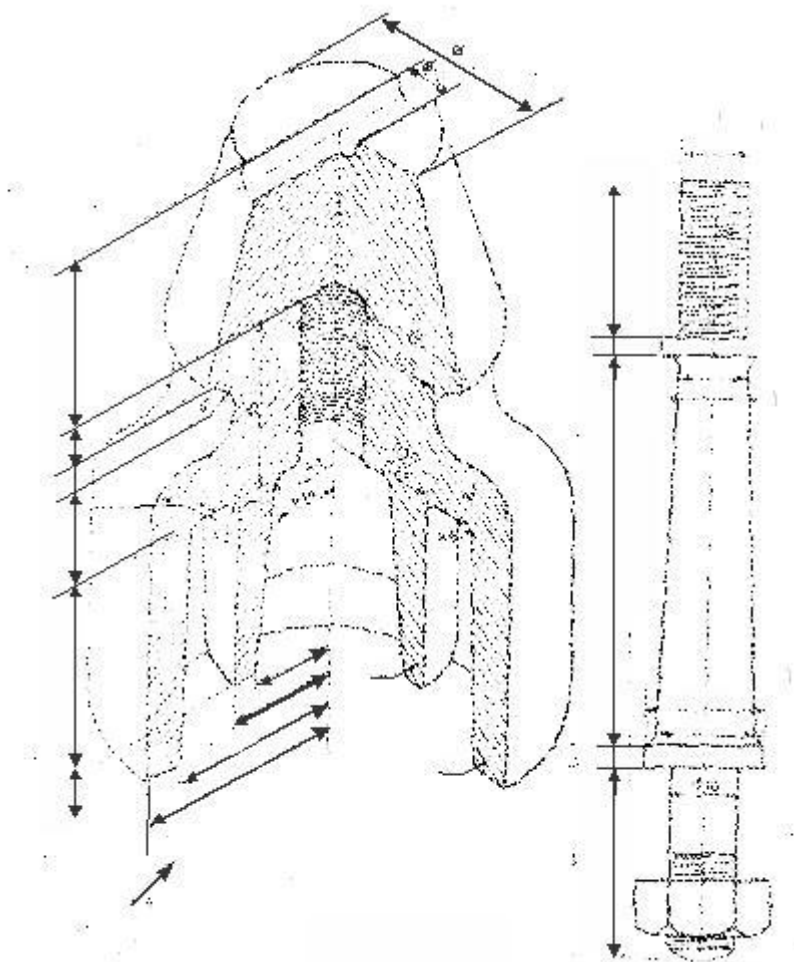
Electrical Engineering Design and Drawing

Very Short Answer type questions

- Q Re-wire able fuse
- Q Siren
- Q Buzzer
- Q Ceiling fan
- Q Fan regulator
- Q D.C. Motor
- Q Zero Adjuster
- Q Motor Starter
- Q Voltmeter
- Q Wattmeter
- Q Earth Point
- Q Flood light
- Q 5 ampere, 3 pin socket outlet
- Q Energy Meter
- Q Main fuse board without switch "Power"
- Q Magnetic Screening
- Q Galvanometer
- Q Manually operated fire alarm.

Q. Draw the wiring diagram to control a 3 phase induction motor by using DOL starter
or

Draw the wiring diagram for sequence starting of 2 three phase induction motor
by using TDR.20



Q. Draw wiring diagram and single line diagram showing connection of single phase energy meter; double pole main switch and distribution board for 5 sub circuit.

or

QDesign the main board for a large residential building which should be provided with two double pole iron clad main switch to control state board supply and generator supply respectively. A double pole double throw change over switch for changeover 25 from electricity board supply to generator supply or vice-versa. In which to control 5 single pole MCB & one neutral link.