QUESTIONS FOR ELECTRICAL AND ELECTRONICS IIT

1) Matter is made up of tiny particles called...
   - *Molecules*
   - Atoms

2) .....are made up of further smaller particles called protons, neutrons and electrons.
   - *Atom*
   - Molecule

3) The outer most orbit of an atom is called the .....orbit.
   - *Valence*
   - Ring
   - Sphere
   - Electrons

4) Depending upon the number of .....electrons in an atom, the materials can be classified as conductor, insulators and semiconductors.
   - Orbit
   - Ring
   - *Valence*
   - Neutrons

5) In atoms having 1 0r 2 electrons in its valence orbit, such materials are called ...
   - insulator
   - *Conductor*
   - semiconductor

6) Atoms having 5,6,7 or 8 valence are called ...
   - *Insulators*
   - conductor
   - semiconductor

7) Atoms having 4 valence electrons are called ...
   - insulators
   - conductor
   - *Semiconductor*

8) The opposition to the free flow of electrons is called electrical...
   - *Resistance*
   - Conduction
   - Convection
   - Radiation

9) For general electronic circuit soldering work solder with 60%..... and 40%..... is most suited.
   - *Tin & lead*
   - Chromium and brass
   - Silver and lead
   - Antimony and lead

10) .....flux is ideal for soldering electronic components
   - *Rosin*
   - water soluble
   - organic
   - inorganic

11) The ....layer on metal interferes with soldering hence flux is used to dissolve it.
- *Oxide*
- Sulfide
- Nitride
- Carbide

12) Coating of wire using a soldering iron is called ...
- *Tinning*
- insulating
- conducting
- Anti-wicking

13) To avoid capillary action while tinning under the unstripped insulation .....is done.
- *Anti-wicking*
- insulating
- conducting
- soldering

14) A connection made by mechanical compression is called...
- Anti-wicking
- insulating
- conducting
- *Crimping*

15) .....is the basic property of elementary particles of matter.
- *Charge*
- Electron
- Proton
- Orbit

16) stationary charges are called ...
- *Static Charges*
- dynamic charges

17) The motion of charged particle is any median is called ...
- voltage
- *Current*
- resistance
- charge

18) The net transfer of charge per unit time is called current measured in...
- volts
- *Ampere*
- coulomb
- ohms

19) The unit of a charge is called the..... as equal to the charge of $6.25*10^{18}$
- electrons or protons
- neutrons
- *Coulombs*

20) The symbol for electric charge is...
- *Q or Q=1C*
- V
- I
- r

21) when two charges have a difference in potential, the electric force that exist between them are called the ...
   - *emf(electro motive force)*
   - electrical charge
   - electro-magnetic force
   - electrical magnified force

22) The unit of measure used to indicate the strength of emf is ...
   - ampere
   - coulomb
   - *Volts*
   - ohms

23) When a difference of potential causes 1 coulomb of charge to do .....of work, the emf is 1 volt.
   - Ergs
   - Dynes
   - *Joule*
   - Pascal

24) The unit of measure for the amount of current flowing through a wire or a circuit is...
   - volts
   - *Ampere*
   - dynes
   - Joule

25) If 1 coulomb of charge passes a point in 1 sec then a current of 1..... is said to be flowing.
   - volts
   - *Ampere*
   - dynes
   - Joule

26) 1 milliampere equals to .....ampere.
   - *1/1000*
   - 1/2000
   - 1/1001
   - 1/1002

27) 1 micro-ampere equals to .....of an ampere.
   - 1/1000
   - 1/10000
   - *1/1000000*
   - 1/100

28) A .....cell is one source of converting chemical energy into electrical energy.
   - Chemical
   - *Battery*
   - Photo-electric
   - Solar

29) Photo-cell converts .....energy into electrical energy.
   - Battery
   - Photo-electric

- Solar
- *Light*

30) A dynamo converts mechanical energy into .....Energy.
- *Electrical*
- Photo-electric
- mechanical
- light

31) Thermal power stations convert .....energy into electrical energy.
- electrical
- *Heat*
- *Mechanical*
- light

32) A constant supply of electricity is called .....supply.
- *D.C*
- Photo-electric
- A.C
- Light

33) The electricity which reverses or alternates in its direction periodically is called....
- D.C
- Photo-electric
- *A.C*
- Chemical energy

34) Electricity generated by hydro/thermal/nuclear power station is ...
- D.C
- Wind energy
- *A.C*
- Chemical energy

35) Electricity generated by some generators is ...
- *D.C*
- Wind energy
- A.C
- Chemical energy

36) .....energy is converted into electrical energy by hydro power station.
- electrical
- Photo-electric
- *Mechanical*
- light

37) The domestic voltage of 230 volts A.C is called the ...
- Electrical voltage
- *Low Tension Voltage (LT)*
- Feeble voltage
- High tension voltage (HT)

38) The industrial voltage of 660 volts A.C is called the ...
- Electrical voltage
- Low tension voltage (LT)
- Feeble voltage
- *High Tension Voltage (HT)*

39) The method used for making PCB (printed circuit board) is known as...
- Photo etching

- Chemical etching
- Mechanical etching
- *Etching*

40) Batteries which 1st store electrical energy supplied to it and then supply electrical energy as and when required is called ...
- bus bar
- *Storage Batteries*
- batteries
- dry batteries

41) In the electronic appliances LED's are known as...
- low voltage device
- *Light Emitting Device*
- low emitting device
- light energy device

42) Lamps used in the electronic/electrical equipment are called...
- bulbs
- tubes
- *Miniature Lamps*
- light emitting device

43) the incandescent lamp used nowadays to save energy are called ...
- bulbs
- tubes
- miniature lamps
- *Compact Fluorescent Light (CFL)*

44).....are widely used to do continuity testing.
- Ammeter
- Voltmeter
- Millimeter
- *Multimeter*

45).....are electronic components used to reduce or limit or resist the flow of electrical or electronic current?
- Ohms
- *Resistors*
- Diodes
- Transistors

46) The most delicate portion of a resistor is the joint between the..... and the resistor body.
- *Lead*
- Resistors
- Diodes
- Transistors

47).....is due to the observation mismatching between the observers eye and pointer of the scale.
- mistake
- error
- blunder
- *Parallax*

48) A variable resistor is commonly known as ...
- Ammeter
- Voltmeter

- *Potentiometer*
- Multimeter

49) Cobalt and nickel are nonmagnetic...
- True
- False
- Cant say
- None of the above

50) The device used to transfer electrical energy either to step-up or step-down is called...
- Potentiometer
- *Transformer*
- Ohmmeter
- Capacitor

51).....are electronic components which can store electric energy in the form of electric charge.
- Potentiometer
- transformer
- Ohmmeter
- *Capacitor*

52).....are semiconductors used to rectify AC to DC?
- Resistors
- Diodes
- Thyristors
- Capacitor

53).....are semiconductor devices having three to four loads/terminals.
- *Transistors*
- Diodes
- Thyristors
- Capacitor

54) I =.....
- R/V
- V/R
- I^2RT
- VR

55) P (power)=.....
- R/VT
- V/RT
- I^2R
- VRT

56) The algebraic sum of currents entering and leaving any point in a circuit must be equal to zero is known as...
- Ohms law
- *Kirchhoff's law*
- Newton's law
- Daltons law

57) The entire group of magnetic lines which can be considered to flow outward from north pole of a magnet is called ...
- magnetic flow
- *Magnetic Flux*
- magnetic travel

- magnetic force

58) The unit of magnetic flux is called .....in CGS system.
- Weber
- *Maxwell*
- Gauss
- Telsa

59) In SI system a larger unit is called ...
- *Weber*
- Maxwell
- Gauss
- Telsa

60) The unit flux density in CGS system is called...
- Weber
- Maxwell
- *Gauss*
- Telsa

61) The SI unit of flux density is called ...
- Weber
- Maxwell
- Gauss (B=Ø/A =flux/area)
- *Telsa*

62) A flux of 10,000 Mx through a perpendicular area of 5cm²the flux density in Gauss will be .....
- 1000
- 2000
- 3000
- *5000*

63) The earth's magnetic flux density is about...
- 1000 Gauss
- *0.200 Gauss*
- 0.300 Gauss
- 0.500 Gauss

64) In the magnetic circuit the lines of force travel from .....pole to .....Pole.
- *North to south*
- South to north
- South to east
- East to north

65) MMF (magneto motive force) = ...
- *I*N(CURRENT*NO OF TURNS)*
- I*V
- I*R
- I*T

66) The .....is a measure of the opposition offered to the setting up of flux in a magnetic circuit.
- Resistance
- *Reluctance*
- Conductance
- Insulation

67) The ..... is an electromagnetic switch or a combination of switches separated by magnetic force generated by a current flowing through a coil.

- Contractor
- *Relay*
- PLC
- Thermocouple

68) **.....are relays with contacts that normally carry 30 or more ampere of current**

- *Contractor*
- **Relay**
- **PLC**
- **Breaker**

69) **The unit of capacitance = ...**

- *Q/V=COULOMB/VOLT=FARADAY*
- V/R
- R/V
- V/Q