Question FBQ1 : The reorientation of a polar material is not perfect due to\_\_\_\_ agitation.  
Answer: Therma  
  
Question FBQ2 : Magnetic susceptibility is negative for\_\_\_\_ substances  
Answer: Diamagnetic  
  
Question FBQ3 : In a dielectric material, the extent of the charge separation depends on the magnitude of the \_\_\_\_ field.  
Answer: local  
  
Question FBQ4 : The maximum safe voltage is for a capacitor is called the \_\_\_\_\_ voltage.  
Answer: working  
  
Question FBQ5 : The presence of dielectric led to the modification of \_\_\_\_ law.  
Answer: Gauss  
  
Question FBQ6 : \_\_\_\_\_\_\_\_ is the property of an electron that makes it behave as if it were rotating around an axis of its own  
Answer: Spin  
  
Question FBQ7 : Diamagnetism involves a change in the \_\_\_\_\_\_ of the magnetic moment of an atom.  
Answer: Magnitude  
  
Question FBQ8 : Two capacitors connected in parallel have \_\_\_ potential difference  
Answer: Equal  
  
Question FBQ9 : Paramagnetism is exhibited by those atoms or molecules in which the \_\_\_\_\_\_\_\_ magnetic moment is not cancelled.  
Answer: Spin  
  
Question FBQ10 : \_\_\_\_\_\_\_\_ is the magnetic dipole moment per unit volume.  
Answer: Magnetisation  
  
Question FBQ11 : \_\_\_\_\_\_\_\_ is the state of magnetic polarization of a material.  
Answer: Magnetisation  
  
Question FBQ12 : The ratio of the magnetic moment and the angular momentum is calledGyro-magnetic \_\_\_\_.  
Answer: ratio  
  
Question FBQ13 : The magnetic susceptibility χm for a diamagnetic material is \_\_\_\_\_?  
Answer: Negative  
  
Question FBQ14 : The magnetic susceptibility χm for a paramagnetic material is \_\_\_\_\_?  
Answer: Positive  
  
Question FBQ15 : Free currents in a \_\_\_\_\_\_ material are caused by external current sources.  
Answer: Magnetized  
  
Question FBQ16 : Magnetic susceptibility is negative for \_\_\_\_\_ substances.  
Answer: Diamagnetic  
  
Question FBQ17 : The relative permeability *Km* for a ferromagnetic material is \_\_\_\_\_ than unity.  
Answer: Greater  
  
Question FBQ18 : The relative permeability *Km* for a diamagnetic material is \_\_\_\_\_ than unity.  
Answer: Less  
  
Question FBQ19 : An atom which loses an electron becomes \_\_\_\_\_\_\_\_?  
Answer: A cation  
  
Question FBQ20 : An atom which gains an electron becomes \_\_\_\_\_\_\_?  
Answer: An anion  
  
Question FBQ21 : Conducting materials contain\_\_\_\_ which are free to move about.  
Answer: Electrons  
  
Question FBQ22 : Molecules that acquire a dipole moment only in the presence of an electric field are \_\_\_\_\_\_\_.  
Answer: Non- polar  
  
Question FBQ23 : Molecules whose centre of positive charges coincides with the centre of negative charges are \_\_\_\_\_\_?  
Answer: Polar  
  
Question FBQ24 : Molecules that possess a permanent dipole moment irrespective of the presence of an electric field are \_\_\_\_\_\_\_\_\_\_?  
Answer: Polar  
  
Question FBQ25 : Ferromagnetic materials are used in the cores of transformers have very\_\_\_\_\_ hysteresis loop.  
Answer: narrow  
  
Question FBQ26 :

Two plates of a parallel plate capacitor are 8.85 mm apart and 2.00 m2 in area. Compute the capacitance of the parallel plate capacitor. (Take ɛo = 8.85 x 10-12 F/m).  
Answer: 2 x 10-9 F  
  
Question FBQ27 :

What is the charge on a parallel plate capacitor with capacitance of 3.54 µF when a potential difference of 10,000 V is applied across it?  
Answer: 0.0354 C  
  
Question FBQ28 : \_\_\_\_\_\_\_\_\_\_\_ is the SI unit of capacitance?  
Answer: Farad  
  
Question FBQ29 : Magnetic fields are due to\_\_\_\_ charges in motion.  
Answer: Electric  
  
Question FBQ30 : A non-polar molecule acquires a \_\_\_\_ moment only in the presence of an electric field.  
Answer: Dipole  
  
Question FBQ31 : What happens to the capacitance of a parallel plate capacitor if we increase the distance of separation between the parallel plates of a capacitor by two?  
Answer: The capacitance reduces by a factor of 2  
  
Question FBQ32 : The introduction of a dielectric material between the plates of a parallel plate capacitor \_\_\_\_\_\_\_\_\_ the capacitance?  
Answer: increases  
  
Question FBQ33 : Materials which respond very strongly to the presence of magnetic fields are called\_\_\_ materials  
Answer: Ferromagnetic  
  
Question FBQ34 : In \_\_\_ molecules the centres of positive and negative charges are located at different points.  
Answer: polar  
  
Question FBQ35 : The value of the magnetic flux B when the magnetic intensity H is zero is called \_\_\_\_  
Answer: Remanence  
  
Question MCQ1 : The capacitance of a parallel plate capacitor depends on\_\_\_\_.  
Answer: All the options   
  
Question MCQ2 : The magnetic dipole moment per unit volume is called\_\_\_\_\_.  
Answer: Magnetisation  
  
Question MCQ3 : In a dielectric material, the extent of the charge separation depends on the magnitude of the \_\_\_.  
Answer: Local field  
  
Question MCQ4 : The presence of dielectric led to the modification of \_\_\_\_\_law.  
Answer: Gauss'  
  
Question MCQ5 : Two capacitors connected in parallel have\_\_\_\_\_.  
Answer: Equal potential difference  
  
Question MCQ6 : Inside a dielectric, the average electric field is \_\_\_\_\_than the electric field causing polarisation.  
Answer: Less  
  
Question MCQ7 : The magnitude of the force *F* between two charges *q1* and *q2* kept at a distance *r*in a dielectric medium of permittivity *ɛ* is given by:  
Answer: **|F| = q1q2/4πɛr2**  
  
Question MCQ8 : A parallel plate capacitor has a capacitance of 1.0 F and the plates are 1.0 mm apart. What is the area of the plates? (Take ɛo = 8.85 x 10-12 F/m)  
Answer: 1.13 x 108 m2  
  
Question MCQ9 : Two plates of a parallel plate capacitor are 8.85 mm apart and 2.00 m2 in area. Compute the capacitance of the parallel plate capacitor. (Take ɛo = 8.85 x 10-12 F/m).  
Answer: 2 x 10-9 F  
  
Question MCQ10 : Materials which respond very strongly to the presence of magnetic fields are called\_\_\_.  
Answer: Ferromagnetic  
  
Question MCQ11 : The line integral of E around any closed path equals the rate of change of the magnetic flux φ through the surface enclosed by the path is --------------------law  
Answer: Faraday's  
  
Question MCQ12 : What is the effective capacitance of a parallel arrangement of 4 µF and 4 µF capacitors?  
Answer: 2 µF  
  
Question MCQ13 : Two point charges *q1*=10nC and *q2*= -60nC are separated by a distance *r*= 6cm. What is the magnitude of the electric force that *q1*exerts on *q2*?  
Answer: 1.5 x 10-5N  
  
Question MCQ14 : Conducting materials contain \_\_\_\_\_ which are free to move about.  
Answer: Electrons  
  
Question MCQ15 : The dipole moment per unit volume is called\_\_\_\_\_.  
Answer: Polarisation  
  
Question MCQ16 : The energy stored in a capacitor of capacitance 10 μF is 5 J. What is the voltage applied across its terminals.  
Answer: 1,000 V  
  
Question MCQ17 :

What is the dipole moment of a dipole comprising two charges q1 = +8.0nC and q2 = -8.0nC with 100 mm separation?  
Answer: 8.0 x 10-10 Cm  
  
Question MCQ18 : How much charge is in a 1F capacitor which has a potential difference of 110V?  
Answer: 110 C  
  
Question MCQ19 :

Three capacitors of equal capacitance C are connected in series. What is the effective capacitance of the circuit?  
Answer: C/3  
  
Question MCQ20 : Magnetic field intensity H is measured in \_\_\_\_\_.  
Answer: Amperes per metre  
  
Question MCQ21 :

If an atom loses an electron, it becomes which of the following?  
Answer: A cation  
  
Question MCQ22 :

If an atom gains an electron, it becomes which of the following?  
Answer: An anion  
  
Question MCQ23 :

The plates of a parallel plate capacitor are separated by a distance. If a dielectric slab is inserted between the plates, the energy stored is \_\_\_\_\_\_?  
Answer: Decreased  
  
Question MCQ24 : The unit for the energy stored per unit volume in a dielectric medium is \_\_\_\_\_\_\_\_?  
Answer: J/m3  
  
Question MCQ25 : Which type of capacitor is used in low loss precision circuit where miniaturisation is important?  
Answer: Ceramic  
  
Question MCQ26 : Which of these is true of paramagnetic materials?  
Answer: They get displaced in the direction of increasing field.  
  
Question MCQ27 : Which of these is true of diamagnetic materials?  
Answer: They get attracted in the direction of the decreasing field.  
  
Question MCQ28 : The ratio of the magnetic moment and the angular momentum is called \_\_\_\_\_\_?  
Answer: Gyro-magnetic ratio  
  
Question MCQ29 : Diamagnetism involves a change in the \_\_\_\_\_\_ of the magnetic moment of an atom.  
Answer: Magnitude  
  
Question MCQ30 : In paramagnetic and diamagnetic materials the magnetisation is maintained by the\_\_\_\_\_.  
Answer: Field  
  
Question MCQ31 : The maximum safe voltage for a capacitor is called the\_\_\_\_\_voltage.  
Answer: Working  
  
Question MCQ32 : Calculate the energy stored in the magnetic field of a 3H inductor which carries a current of 2A.  
Answer: 6J  
  
Question MCQ33 : The work done per unit charge is called its \_\_\_\_\_.  
Answer: Potential  
  
Question MCQ34 : Magnetic fields are due to\_\_\_\_ charges in motion.  
Answer: Electric  
  
Question MCQ35 : Free currents in a magnetized material are caused by\_\_\_\_\_\_\_\_  
Answer: External current sources