

FBQ1: A negative charge -----negative charge

Answer: *repels*

FBQ2: Electric charge between two bodies can be produced by -----

Answer: *rubbing*

FBQ3: The principle that electric forces add vectorially is known as the principle of -----

Answer: *superposition*

FBQ4: The force that is responsible for holding electrons to nuclei to form atoms is called the ----- force

Answer: *Electrostatic*

FBQ5: The magnitude of the forces between charged spheres was first investigated by Charles -----

Answer: *Coulomb*

FBQ6: A region where an electric charge experiences a force is -----
field

Answer: *electric*

FBQ7: The work done in taking a unit positive charge from one point to another in electric field is ----- of the path chosen between the two points.

Answer: *Independent*

FBQ8: The potential difference between two points B and A is equal to the -----
----- in taking a unit positive charge from A to B.

Answer: *Work done*

FBQ9: Whose law is employed in electrostatics $\hat{A}-\hat{A}$?

Answer: *Coulomb*

FBQ10: The energy stored in a system of charges is known as electrostatic potential ----

Answer: *energy*

FBQ11: Find the force on a charge 2C in a field $1\text{Vm}\&\text{sup}\&\text{gt};-1\&\text{lt};/\text{sup}\&\text{gt};$ -----

Answer: *2N*

FBQ12: Electric field is measured in Newton per -----.

Answer: *Coulomb*

FBQ13: The charges on capacitors connected in parallel are in the ratio of their -----

Answer: *Capacitance*

FBQ14: For capacitors in parallel, the potential difference across each capacitor is -----

Answer: *the same*

FBQ15: For capacitors connected in series each has the same _____.
Answer: *Charge*

FBQ16: The magnitude and direction of the earth's field varies with position over the ----
----- surface.
Answer: *Earth*

FBQ17: Field lines are drawn such that the lines per unit cross-section area is
proportional to -----field.
Answer: *Electric*

FBQ18: The ----- is the SI Unit of electric charge
Answer: *Coulomb*

FBQ19: When a charge density depends only on the perpendicular distance from a
plane, the charge distribution is said to have----- symmetry.
Answer: *plane*

FBQ20: Electric flux density is a function of -----
Answer: *charge*

FBQ21: 1eV is the energy acquired by an electron in falling freely through -----
----- 1volt.
Answer: *Potential difference*

FBQ22: As charge increases, electric flux density \hat{A} -----
Answer: *increases*

FBQ23: The minimum energy required to liberate an electron from a metal surface is
called -----.
Answer: *Excitation*

FBQ24: A body that absorbs all radiations falling on it is known as -----.
Answer: *Blackbody*

FBQ25: The ----- number is the total number of neutrons and protons.
Answer: *Mass*

FBQ26: The direction of the electric field is opposite to that of the force if the charge is --

Answer: *Negative*

FBQ27: The force between electric charges is known as -----
Answer: *Electric Force*

FBQ28: The electric flux is a ----- quantity.

Answer: *Scalar*

FBQ29: Gauss's law applies to any hypothetical closed surface called -----
---- surface.

Answer: *Gaussian*

FBQ30: The force applied to a conductor is 10N if the charge in the conductor is 5C,
what is the electric field intensity?

Answer: *2V/m*

FBQ31: When an atom is in the ground state it is said to be -----

Answer: *Stable*

FBQ32: When beta decay occurs ----- changes into a proton and
electron.

Answer: *Neutron*

FBQ33: An alpha particle is a ----- nucleus consisting of 2 protons and
2 neutrons.

Answer: *Helium*

FBQ34: When a dielectric material is inserted between the plates of a capacitor it
increases its -----

Answer: *Capacitance*

FBQ35: Potential difference is the work done in moving a unit charge ____ from one
point to another in an electric field.

Answer: *Positive*

FBQ36: The surface integral of the electric field E over a surface is defined to be
electric -----

Answer: *flux*

FBQ37: Gaussian surface is an imaginary closed -----

Answer: *surface*

FBQ38: The magnetic North is found by suspending a bar magnet freely on the -----
----- axis.

Answer: *Vertical*

FBQ39: At the _____ a dipping compass needle is horizontal and at the magnetic
poles it is vertical.

Answer: *magnetic equator*

FBQ40: The variation of the compass from the north-south direction is called the -----

Answer: *Declination*

FBQ41: <p style="text-align:left">Six equal point charges $Q = 10\text{nC}$ are located at

2,3, 4,5,6,7m. Find the potential at origin.

Answer: *143.35*

FBQ42: According to Faraday's law, the magnitude of the induced e.m.f is proportional to the rate of change of ----- linking the circuit.Â

Answer: *magnetic flux*

FBQ43: Property of magnetic material in which ----- attracts or repels.

Answer: *charge*

FBQ44: In the cathode ray oscilloscope, when fast moving electrons strike the glass screen coated with zinc and sulphide they cause -----.

Answer: *Fluorescence*

FBQ45: In the method of charging by friction, The algebraic sum of the individual charges that is the net charge is -----.

Answer: *Constant*

FBQ46: The resistivity of a semiconductor decreases rapidly with increasing -----.

Answer: *Temperature*

FBQ47: According to ohm's law the potential difference is proportional to the -----.

Answer: *Current*

FBQ48: The study of static charges is called -----.

Answer: *Electrostatics*

FBQ49: A charge distribution in which the charge density at any point depends only on the distance of the point from a central point and not on the direction is said to be spherically -----.

Answer: *symmetric*

FBQ50: Neutral objects constitute of equal -----.

Answer: *charge*

Multiple Choice Questions (MCQs):

MCQ1: What is the potential difference in an open circuit called?

Answer: Zero

MCQ2: The potential taken between two points across a resistor will be ____.

Answer: Positive

MCQ3: The Gaussian surface for a line charge will be ____.

Answer: Sphere

MCQ4: The Gaussian surface for a point charge is

Answer: Cube

MCQ5: Gauss law cannot be used to find which of the following quantity?

Answer: Electric field intensity

MCQ6: The quantity of charge flowing per second through a conductor of 1A is known as _____.

Answer: Total Amperes

MCQ7: The _____ meridian is the vertical plane in a direction of geographic north and south.

Answer: geographic

MCQ8: The _____ meridian is the vertical plane in which a magnet set itself at a particular place.

Answer: Magnetic

MCQ9: The angle of _____ is the angle between the magnetic and geographic meridians.

Answer: Vertical

MCQ10: The _____ of a substance is the number of times the average mass of one of the molecules is greater than the atomic mass unit.

Answer: Atomic weight

MCQ11: Which of these pairs are the clearing fluids required for the determination of surface tension of water by rise in a capillary tube?

Answer: sodium oxide and nitric acid

MCQ12: Electric charge enclosed by Gaussian surface is

Answer: 0

MCQ13: The variation of the compass from the north-south direction is called the _____.

Answer: Declination

MCQ14: The _____ variation is a low unpredictable change in the local values of the magnetic elements.

Answer: Lower magnetic

MCQ15: According to Faraday's law, the magnitude of the induced e.m.f is proportional to the rate of change of _____ linking the circuit.

Answer: magnetic flux

MCQ16: A transformer is a device which changes an alternating _____ From one value to another using the principle of mutual induction.

Answer: potential difference

MCQ17: The ratio of the e.m.f induced in the secondary and primary coils is equal to the transformer _____.

Answer: Current ratio

MCQ18: The lines of force are said to be ____

Answer: real

MCQ19: Electric field originates at ____

Answer: Positive charge

MCQ20:

| |
|---------------------------------------|
| The electric field is said to be ____ |
|---------------------------------------|

Answer: Electric field

MCQ21: Charging a body by rubbing is achieved through ____.

Answer: Friction

MCQ22: Which one among the following is the field where electric charge experiences a force?

Answer: Electric field

MCQ23: The properties of a charge include which of the following?

Answer: Potential

MCQ24: Coulomb's law applies to ____.

Answer: Long charges

MCQ25: The _____ is the amount of energy equal to the change in energy of one electronic charge when it moves through a potential difference of one volt.

Answer: electron-volt

MCQ26: A voltameter is a cell designed for the study of ____.

Answer: Electrolysis

MCQ27: The _____ is the use of electrolysis to coat one metal with another.

Answer: Electroplating

MCQ28: A _____ is a system in which two electrodes are in contact with an electrolytic.

Answer: Focus

MCQ29: One of the main disadvantages of the Leclanche cell is that ____.

Answer: the zinc case takes part in the reaction

MCQ30: The force between two particles is inversely proportional to the square of distance between them and proportional to the product between the two is the statement of ____.

Answer: Einstein

MCQ31: Total electric flux through any closed surface is equal to the charge enclosed by that surface. This is the statement for?

Answer: Gauss law

MCQ32: As area increases, what happens to electric flux density?

Answer: increases

MCQ33: Strength of the electric field is _____

Answer: Directly proportional to the force applied

MCQ34: Gauss law cannot be used to find which of the following quantity?

Answer: Electric field intensity

MCQ35: Gauss law can be evaluated in which coordinate system?

Answer: Cartesian

MCQ36: Charging by _____ is the process of charging two bodies by means of rubbing them together.

Answer: Electric

MCQ37: The _____ is the SI Unit of electric charge.

Answer: coulomb

MCQ38: The unit of permittivity is _____.

Answer: farad per metre

MCQ39: Coulomb's law applies to _____.

Answer: point masses

MCQ40: Electric field lines are represented by _____.

Answer: lines of force

MCQ41: Choose the correct option.

Answer: $F = E/q$

MCQ42: The relation between an electric charge and electric field is express by _____.

Answer: Ohm's law

MCQ43: The _____ is most essential for the production of electrons by thermionic emission.

Answer: Cool anode

MCQ44: The process by which an electron is emitted from a hot filament is called _____.

Answer: Cathodic emission

MCQ45: The number of the lines of force crossing any surface depends on the orientations of the surface relative to the electric field, the field strength and ____.

Answer: Permittivity

MCQ46: With Gauss law as reference which of the following law can be derived?

Answer: Ampere law

MCQ47: Which, among the following, will be unity in free space

Answer: volume

MCQ48: Choose the incorrect option. The unit of ____.

Answer: $E=N/C$

MCQ49: Which is correct?

Answer: Lines of force shows the direction in which negative charge would accelerate

MCQ50: The arrow in a line of force indicates ____.

Answer: scalar