Final Assessment Quiz

PHY-106

The respondent's email address (**201370212@gift.edu.pk**) was recorded on submission of this form.

1. The pointer of a magnetic compass * 1 point

- [ ] is affected only by permanent magnets
- [ ] Aligns itself parallel to the applied magnetic field
- [ ] vibrates in the magnetic field of the current
- [x] Aligns itself perpendicular to the magnetic field

* 1 point

Given that $\vec{B} = 40\hat{\imath} - 18\hat{k}$. The vector $\vec{B}$ lies in:

- [ ] XY Plane
- [ ] XZ Plane
- [ ] YZ Plane
- [x] None of these

At a given instant, a proton moves in the +x direction in a region where there is magnetic field in the -z direction. The magnetic force on the proton will be the: * 1 point

- ( ) -y direction
- ( ) +y direction
- ( ) +z direction
- (•) -z direction

An electric intensity is a potential gradient, if may expressed in the units of N/C or * 1 point

- ( ) Volt
- ( ) Volt meter
- ( ) Volt per meter
- (•) Joule

A torch bulb uses a 5 V supply and makes a current of 0.5 A. It is switched on for 1 year. How much electrical energy is used? * 1 point

- (•) 78,840,000J
- ( ) 78,840,00 J
- ( ) 78,8400 J
- ( ) 78,840 J

Equipotential surfaces in an electric field are always * 1 point

- [ ] Spherical
- [ ] Closed Surfaces
- [ ] Tangent to the electric lines of force
- [x] perpendicular to the lines of force

which statement describes the electric potential difference between two points in a wire that carries a current? Hint (use the Power Formula) * 1 point

- [x] The force required to move a unit positive charge between the points
- [ ] The ratio of the energy dissipated between the points to the current
- [ ] The ratio of the power dissipated between the points to the current
- [ ] The ratio of the power dissipated between the points to the charged move

What can be used as the unit of energy? * 1 point

- [x] N/m
- [ ] V A
- [ ] V/C
- [ ] W s

If a current of 2 A passes through a wire for 20 s, What number of electrons crossed the cross-section in this duration? * 1 point

- [ ] 1.5 X 10^20
- [ ] 1.5 X 10^21
- [x] 1.5 x 10^22
- [ ] 1.5 x 10^23

The ratio of Drift velocity and Electric field is: * 1 point

- [x] qt/m
- [ ] et/m
- [ ] e/m
- [ ] Both qt/m and et/m

Which of the following field is governed by the Maxwell's equations? * 1 point

- [ ] Electrodynamics
- [ ] Optics
- [x] Electric circuits
- [ ] All of these

It is often contended that V = iR is a statement of ---------- but it is known as ---------- _ * * 1 point

- ( ) Ohm's law and equation for Potential Difference
- ( ) Ohm's law and equation for Current
- (•) Ohm's law and equation for resistance
- ( ) equation for resistance and ohm's law

What is the value of current in a wire of 100 cm long at right angle to the uniform magnetic field of 0.5 Tesla when the force acting on the wire is 5 N? * 1 point

- ( ) 10 A
- ( ) 0.1 x 10^2 A
- ( ) 1000 x 10^-2
- (•) All of these

A long straight wire of radius R=1 m carries a steady current 1 A. What is the magnetic field at the surface of the wire? * * 1 point

- ( ) 0.0002 mT
- (•) 0.2 mT
- ( ) 0.002 mT
- ( ) 0.02 mT

What is the displacement current if you have an rate of change of electric field dE/dt=1 V/m and cross sectional area A= 3 m^2 . * 1 point

- [ ] 0.0265 nano ampere
- [x] 0.265 nano ampere
- [ ] 26.5 nano ampere
- [ ] 2.65 nano ampere

If we increase the value of current as Square root of 4 times Ampere then how much value of voltage we will increase to keep the R constant in this equation R=V/I * 1 point

- [ ] 4 V
- [x] 2 V
- [ ] no change
- [ ] 3 V

The quantity analogue to potential difference is * 1 point

- [ ] Pressure
- [ ] Mass
- [ ] Energy
- [x] Inertia
- [ ] Other: .....

If the number of coulombs per second through a wire of 10 ohm resistance across 12 V line is 12, the current is * 1 point

- [ ] 5 A
- [ ] 10 A
- [ ] 12 A
- [x] 15 A

Gauss's Law is most useful in cases where the charge distributions * 1 point

- [ ] are made up of discrete point charges
- [ ] are finite in their spatial extent
- [ ] give rise to inverse square law fields
- [x] posses a certain amount of symmetry

Electric field intensity at a point is * 1 point

- [ ] inversely proportional to the square of the distance from the charge
- [ ] Directly proportional to the square of the distance from the charge
- [ ] inversely proportional to the distance from the charge
- [x] None of these