

### **Answer on Question 51720, Physics, Electromagnetism**

1. When electric charges moves in closed loops --- force is produced

- a) Electrostatic
- b) Magnetic
- c) Gravitational
- d) Nuclear

**Answer:**

When electric charges moves in closed loops it produced the magnetic force.

So, the correct answer is b) Magnetic.

2. When glass is rubbed with silk

- a) Glass is positively charged while silk is negatively charged.
- b) Glass is negatively charged while silk is positively charged.
- c) Glass is positively charged while silk is neutral.
- d) Glass is negatively charged while silk is neutral.

**Answer:**

When we rubbing a glass rod with silk, we strip the atoms of the glass rod of their electrons, which are negatively charged. So, the electrons living the glass rod and it becomes positively charged. And the silk will acquire these electrons and becomes negatively charged. Thus, the correct answer is a) Glass is positively charged while silk is negatively charged.

9. From Gauss' law which of the following is not correct:

- a) The outward flux of electric field through an enclosed surface is proportional to the electric charges enclosed.
- b) The field at a point outside a spherically symmetric charge is the same as the electric field at the same point due to a point charge at its centre.

- c) The electric flux through a Gaussian surface is a vector product of the electric field and a unit vector perpendicular to and outward from the surface.
- d) The total electric flux through a cylinder placed in an electric field with its axis parallel to the field is zero.

**Answer:**

The Gauss' law states that the total flux of the electric current through a closed surface is proportional to the total charge inside the surface. Thus, the incorrect statement is a) The outward flux of electric field through an enclosed surface is proportional to the electric charges enclosed.

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