

Answer on Question #46019 – Physics – Electromagnetism

Question.

When glass is rubbed with silk

glass is positively charged while silk is negatively charged

glass is negatively charged while silk is positively charged

glass is positively charged while silk is neutral

glass is negatively charged while silk is neutral

Solution.

When the net electric charge of an object is non-zero and motionless, the phenomenon is known as static electricity. This can easily be produced by rubbing two dissimilar materials together. Charge taken from one material is moved to the other material, leaving an opposite charge of the same magnitude.

When you are rubbing the glass rod with the silk cloth, electrons are stripped away from the atoms in the glass and transferred to the silk cloth. This leaves the glass rod with more positive than negative charge, so you get a net positive charge.

Positive charge can be defined as the charge left on a glass rod after being rubbed with silk. When a glass rod is rubbed with silk cloth, some of the electrons are removed from the atoms of the glass rod and deposited on the silk leaving negatively charged and glass positively charged. So, glass is positively charged while silk is negatively charged.

Answer.

glass is positively charged while silk is negatively charged