

SAINT JOSEPH'S PREPARATORY SCHOOL
PHYSICS TEST QUESTIONS.....T P FITZPATRICK
Static Electricity

1. What is the force of electrostatic repulsion between two protons separated by a distance to 15.4 cm? What is the force of gravitational attraction between them?
2. A styrofoam peanut has a mass of 5.00 g. If there is an electric field near the earth's surface equal to 150 N/C directed downward, what charge placed on the peanut will result in "levitation"?
3. What is the electric field at the origin caused by 5.25×10^{12} electrons placed on the axis 25.0 cm in the positive y direction from the origin?
4. What charge would cause a $+2.5 \mu\text{C}$ charge to experience an attractive force of 2.25 N when placed 15.0 cm away?
5. What is the electric field associated with a $+2.55 \text{ C}$ charge 36.0 m North of it?