

Name:

Grade and Section:

Score: /10.0

Date:



Quiz # 1 on Electric Charge, Coulomb’s Law, Electric Fields, and Electric Flux

GENERAL INSTRUCTIONS:

- 1.) Use No. 2 pencil only to shade your answer. To change your answer, neatly erase your old answer and shade the new one. You may request a scratch paper from the proctor whenever you need to.
- 2.) Scientific calculators are allowed while other electronic devices are prohibited.
- 3.) Any form of cheating in examinations or any act of dishonesty in relation to studies shall be subject to disciplinary action.

I. Multiple Choice. Shade the letter of the BEST answer (5 points).

1. Two unlike charges_____
- a

attract each other

b

neutralize each other
- c

repel each other
- d

have no effect on each other

2. Which of the following is not a process of charging?

a

Induction

b

Conduction

c

Friction

d

Convection

3. Material A is positively charged. When brought near to material B, they attract. Which of the following is true?

a

Material B is negatively charged

b

Material B is positively charged

c

Material B is uncharged

d

Both are uncharged

4. Material B has become positively charged after rubbing it with Material A. Which of the following statements is correct?

a

Material B loses protons

b

Material B gains electrons

c

Material A loses proton

d

Material A gains electron

5. What will happen when two unlike charges are brought together? They will _____

a

repel each other

b

attract each other

c

neutralize each other

d

no effect on each other

II. True or False. Determine whether the statements are TRUE or FALSE by shading the BEST ANSWER (3 points).

6. Charging objects could happen through induction and conduction.
- a

True

b

False
7. When a charged object is placed near the metal knob, this causes the foil to open up since they are being repelled by the presence of excess charges.
- a

True

b

False
8. Electric flux refers to the amount of electric field lines penetrating a given surface.
- a

True

b

False

III. Problem Solving. Solve the given problem. Write your GIVEN, REQUIRED, SOLUTION and box your final answer with proper statement (2 points).

9. A point charge $q = 8.00 \times 10^{-9} \text{ C}$ is at the center of the cube with sides of length 0.200 m. What is the electric flux through one of the six faces of the cube?
