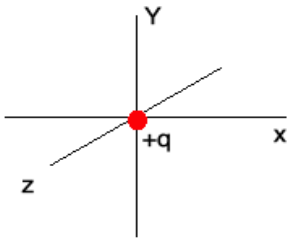
ADVANCED PHYSICS TERM 1 PERIODIC 1 STUDY GUIDE

1. What kind of charge do electrons have?
   a. positive
   b. negative
   c. none

2. What kind of charge do protons have?
   a. positive
   b. negative
   c. none

3. Similar charges...
   a. attract each other
   b. repel each other

4. Opposite charges...
   a. attract each other
   b. repel each other



QUESTIONS 5 – 10

Consider a positive point charge located at the origin of an x, y, z coordinate system.

5. What is the direction of the electric field due to this charge at x = 1m?
   a. left b. right c. up d. down

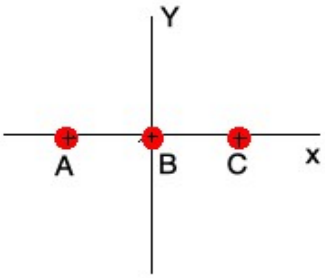
6. What is the direction of the electric field due to this charge at y = 1m?
   a. left b. right c. up d. down

7. What is the direction of the electric field due to this charge at x = -1m?
   a. left b. right c. up d. down

8. What is the direction of the electric field due to this charge at y = -1m?
   a. left b. right c. up d. down

9. What is the direction of the electric field due to this charge at z = 1m?
   a. left b. right c. into the page d. out of the page

10. What is the direction of the electric field due to this charge at z = -1m?
    a. left b. right c. into the page d. out of the page



Questions 11- 15

Three identical positive charges A, B and C are located on the x axis at x = -1, x = 0 and x = +1, respectively.

11. What is the direction of the net force on charge A?
a. left b. right c. up d. down e. net force = 0 N

12 What is the direction of the net force on charge B?
a. left b. right c. up d. down e. net force = 0 N

13. What is the direction of the net force on charge C?
a. left b. right c. up d. down e. net force = 0 N

14. What is the direction of the net electric field at the point (0, 1)?
a. left b. right c. up d. down

15. What is the direction of the net electric field at the point (0, -1)?
a. left b. right c. up d. down