

1- Dynamic equilibrium must have a constant :

- A) **velocity**
- B) net force acting on it
- C) positive acceleration
- D) negative acceleration

11- ( East = شرق ، West = غرب ، North = شمال ) if a man swims north with a speed (4m/s) , across a river with current ( تيار ) of (3m/s) toward West , the resultant velocity of the man ( V ) is:

- A) 7m/s north-west
- B) 5m/s north-east
- C) 7m/s north-east
- D) **5m/s north-west**

12- The number of electrons needed to make up a charge  $Q = 10\mu\text{C}$  is : ( Electron charge =  $1.6 \times 10^{-19}$  )

- A)  **$6.25 \times 10^{13}$**
- B)  $1.6 \times 10^{-14}$
- C)  $1.6 \times 10^{-13}$
- D)  $6.25 \times 10^{14}$

13- If a positive charge (  $Q_1$  ) and a negative charge (  $Q_2$  ) are separated by a distance ( d ) , we can say that :

- A) (  $Q_1$  attract  $Q_2$  ) and (  $Q_2$  attract  $Q_1$  ).
- B) (  $Q_1$  repels  $Q_2$  ) and (  $Q_2$  attract  $Q_1$  ).
- C) (  $Q_1$  repels  $Q_2$  ) and (  $Q_2$  repels  $Q_1$  ).
- D) (  $Q_1$  attract  $Q_2$  ) and (  $Q_2$  repels  $Q_1$  ).