ELECTRICITY

1. What does an electric circuit mean?
2. Define the unit of current.
3. Name the two type of electric charge.
4. What is SI unit of electric potential?
5. What is the name given to flow of electric charge per unit time in a wire?
6. Calculate the number of electrons constituting one coulomb of charge.
7. The filament of an electric bulb draws a current of 0.4 ampere. Calculate the amount of charge flowing through the filament if the bulb glows for 2 hours. Also calculate the number of electrons passed.
8. Calculate the work done in moving a charge of 2C through a potential difference of 5V.
9. A polythene piece is rubbed with wool. It is found to acquire a negative charge of 3.2×10^{-7}C. Estimate the number of electrons transferred to the piece.
10. How many electrons pass through a wire in 1 minute if the current passing through the wire is 200 mA?
11. 2.5 mJ of work is done in moving a charge of 10^{-6} C from one point to another. What is the potential difference between the two points?
12. 1020 electrons each having charge of 1.6×10^{-19} C pass from point A towards another point B in 0.1s. Calculate the current in ampere and give its direction.
13. Calculate the number of electrons flowing per second to constitute a current of one ampere.