Saitechinfo NEET-JEE Physics Worksheets

Saitechinfo NEET-JEE Worksheets in Physics of Atom

1. **An electron ($e = 1.6 \times 10^{-19}$ C) is accelerated to a potential difference of 1 MeV. How much energy in joules has it gained now.**
2. **If 100 volts are applied to an electron gun, what is the velocity of the electrons moving in it? Charge on the electron is 1.6×10^{-19} C and mass 9×10^{-31} kg.**
3. **Calculate the velocity of an electron which has fallen through 15 kV. Charge on an electron is 1.6×10^{-19} C and mass 9.0×10^{-31} kg.**
4. **Calculate the energy in eV of an electron moving with a velocity of 1.192×10^{6} ms^{-1}. Given 1 eV = 1.6×10^{-19} J and $m = 9.0 \times 10^{-31}$ kg.**
5. **Calculate the velocity of an electron when it falls through a potential difference of 600 volts.**
6. **An electron starting from rest reaches another point higher in potential by 45 volts. Find the velocity at the second point.**
7. **A stream of electrons traveling with a velocity of 3×10^{7} ms^{-1} is deflected by 9×10^{-3} m in traveling a distance of 0.2 m through an electric field of 2000 volt/m perpendicular to the path. Find the e/m.**
8. **The value of e/M for hydrogen is 9.578×10^{8} coulomb/gm. If e/m for an electron is 1.79×10^{8} coulomb per gm find the mass of the hydrogen ion, given mass of electron = 9×10^{-13} kg.**
9. **A stream of particles traveling with a velocity of 6×10^{7} ms^{-1} passes between two plates. The electric field between two plates is 27 volts/cm and length of the plates is 0.2 m. Calculate the ratio e/m if the particles are deflected by 27×10^{-4} m at the end of the field. What will be the strength of magnetic field to keep the beam undeflected?**
