Worksheet: Structure of Atom

Maharashtra State Board · Class 11 · Chemistry · 5 questions · 14 marks

Name: _____ Date: _____ Score: _____ / 14

Q1. Find the de Broglie wavelength of an electron moving at 2 x 10^6 m/s (m = 9.1 x 10^-31 kg). *[3 marks]*

Q2. Write the four quantum numbers for the 3p electron of aluminium (Z=13). *[3 marks]*

Q3. Why is chromium's configuration [Ar]4s1 3d5 instead of [Ar]4s2 3d4? *[2 marks]*

Q4. Find the wavelength of the H-alpha line (n=3 to n=2) in the Balmer series. (R_H = 1.097 x 10^7 m^-1) *[3 marks]*

Q5. Calculate the uncertainty in position if the uncertainty in velocity is 0.001 m/s for an electron (m = 9.1 x 10^-31 kg). *[3 marks]*