National Institute of Open Schooling
Senior Secondary
Lesson 26 – Wave Phenomena and Light
WORKSHEET – 26

Q1. Calculate the mass of oxygen atom in amu and also calculate energy.

Q2. If m_e = 0.00594u, m_p=1.007276u, m_n=1.008665u, $m(He^3_2)$=3.016030u. Calculate mass defect.

Q3. Complete
Th^{232}_{90} ....Ra^{228}_{88}........................Ac^{228}_{89} $^{Bdecay}Th^{-----}$---- alpha decay Ra^{--}--Rn^{220}_{86} alpha decay.... ^{21282}............$Bi212_{83}$

Q4. Calculate the numbers of neutron and proton in Cl^{35}_{17}., U^{235}_{92}, Ac^{228}_{89}, Po^{216}_{84}.

Q5. Nuclear radius of O^{16}_8 is $3*10^{-15}_m$ what will be the nuclear radius of Bi^{212}.

Q6. You are given two nuclides of Y^7_3 and Y^4_3 are the isotopes of same element. Which one is more stable? Explain?

Q7. What is nuclear binding energy. Drive mathematical expression for B.E.

Q8. Define alpha, beta, gamma decay in terms of
  ➢ Intensity
  ➢ Charge
  ➢ Ionising power
  ➢ Mass
  ➢ Energy
  ➢ Speed.

Q9. The half life of radium is 1000years. After how many years will 1g of pure radium reduce to 1mg.