

NAT I Computer Science Physics

Sr	Questions	Answers Choice
1	The average binding energy of a nucleon inside an atomic nucleus is about	A. ≈ 8 MeV B. 8 eV C. 8 Joules D. 8 ergs
2	The de broglie wave corresponding to a particle of mass m and velocity v has a wavelength associated with it	A. h/mv B. $hm v$ C. mh/v D. m/hv
3	The structure of solids is investigated by using	A. Cosmic Rays B. X-rays C. Intra red Radiation D. y-rays
4	The half life of a radio-isotope is 5 years The fraction of atoms decayed in this substance after 15 years will be	A. 1 B. $3/4$ C. $7/8$ D. $5/8$
5	As the electron in Bohr orbit of hydrogen atom passes from stat $n = 2$ to $n = 1$ the kinetic energy K and potential energy U change as	A. K two-fold, U also two-fold B. K four-fold, U also four-fold C. K four-fold, U two-fold
6	When a hydrogen atom is bombarded the atom is excited to the $n = 4$ state of hydrogen atom. The energy released when the atom falls from $n = 4$ state to the ground state is	A. 1.275 eV B. 12.75 eV C. 5 eV D. 8 eV
7	The mass defect for the nucleus of helium is 0.0303 a.m.u What is the binding energy per nucleon for helium in MeV?	A. 28 B. 7 C. 4 D. 1
8	The nucleus ${}^{12}_6\text{C}$ absorbs an energetic neutron and emits a beta particle (β) The resulting nucleus is	A. ${}^{13}_7\text{N}$ B. ${}^{14}_5\text{B}$ C. ${}^{13}_7\text{N}$ D. ${}^{13}_6\text{C}$
9	Electrons in the atom are held in the atom due to	A. Coulomb forces B. Nuclear forces C. Gravitational forces D. Van der Waal's forces
10	In which region of electromagnetic spectrum does the Lyman series of hydrogen atom lie	A. Ultraviolet B. Infra red C. Visible D. X-ray