NAT II Physical Science Physics

Sr	Questions	Answers Choice
1	The average binding energy of a nucleus inside an atomic nucleus is about	A. 8 MeV B. 8 eV C. 8 Joules D. 8 ergs
2	The structure of solids is investigated by using	A. Cosmic Rays B. X-rays C. Intra red Radiation D. γ-rays
3	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
4	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 D. K two fold, U four fold
5	The mass of a proton is 1847 times that of an electron. An electron and a proton are projected into a uniform electric field in a direction at right angles to the direction of the field with the same initial kinetic energy.The	A. Both the trajectories will be equally curved B. The proton trajectory will be less curved than the electron trajectory C. The electron trajectory will be less curved than the proton trajectory D. The relative curving of the trajectories will be dependent on the value of the initial kinetic energy
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 6C12 absorbs an energetic neutron and emits a beta particle (β). The resulting nucleus is	A. ₇N¹⁴ B. ₅B¹³ C. ₇N¹³ D. ₆C¹³
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	According to classical theory the proposed circular path of an electron in Rutherford model of atom will be	A. Circular B. Straight line C. Parabolic D. Spiral
11	In which region of electromagnetic spectrum does the Lyman series of hydrogen atom lie	A. Ultraviolet B. Infrared C. Visible D. X-ray
12	The nuclear model of atom was proposed by	A. J.J Thomson B. E. Rutherford C. Neil Bohr D. Summerfield
13	To explain his theory Bohr used	A. Conservation of linear momentum B. Conservation of angular momentum C. Conservation of quantum frequency D. Conservation of energy
14	Who explained the origin of the Fraunhoffer lines?	A. Fraunhoffer B. Kirchhoff

		C. Fresnel D. Snell
15	Band spectrum is produced by	A. H B. He C. H₂ D. Na