Physics ECAT Pre Engineering Chapter 21 Nuclear Physics

Sr	Questions	Answers Choice
1	The half life of uranium-238 is	A. 6.2 x 10⁹years B. 4.5 x 10⁹days C. 4.5 x 10⁹years D. 1.3 x 10⁶years
2	The nuclei of an element having the same charge number but different mass numbers are called:	A. Isobars B. Isotopes C. Isomers D. Isobaric E. Isothermal
3	Radioactivity was discovered by	A. Rutherford B. Henri Becqureal C. Maxwell D. James Chadwick
4	Neutrons are	A. positive charge B. negatively charged C. massless D. neutral
5	The unit of decay constant is	A. sex B. sec² C. sec⁻¹ D. sec⁻²
6	A mass spectrograph sort out	A. molecules B. atoms C. elements D. isotopes
7	Marie curie and Pierre curie discovered:	A. Uranium B. Polonium C. Radium D. Both (A) and (C) E. Plutonium
8	Charge on neutron is	A. 1.6 x 10⁻¹⁹C B. zero C. -1.6 x 10⁻¹⁹C D. 1.2 x 10⁻¹⁹C
9	Mass of neutron is	A. 1.67 x 10⁻³¹kg B. 1.67 x 10⁻²⁷kg C. 9.1 x 10⁻³¹kg D. 1.67 x 10⁻19kg
10	For an atom having atomic number 'Z' and atomic weight 'A', the number of neutrons in the nucleous is	A. A - Z B. A C. Z D. A + Z
11	Nucleon means:	A. Only electrons B. Only neutrons C. Only protons D. Both (A) and (C) E. Both (B) and (C)
12	The chemical behaviour of an atom is determined by	A. binding energy B. atomic number C. mass number D. number of isotopes
13	An alpha particle has a charge of	A. +2e B. -2e C. -e D. +3e
14	During the nuclear changes, the law/s of conservation that hold/s are that of:	A. Charge B. energy C. Momentum D. Mass E. All of these

15	When a nucleus emits an alpha particles, its charge number decreases by	A. 3 B. 2 C. 6 D. 5
16	Nucleus of a hydrogen atom may contain:	A. One neutron only B. Two protons and one neutron C. Two protons and two neutrons D. Aany of above E. One proton only
17	The amount of energy equivalent to 1 a.m.u is	A. 9.315 Mev B. 93.15 Mev C. 931.5 Mev D. 2.22 Mev
18	The half lie of radium-226 is	A. 238 years B. 4.5 x 10⁹days C. 1620 years D. 332 years
19	The reciprocal of decay constant λ of a radioactive material is:	A. Frequency B. Half life C. Year D. Mean life E. None of these
20	The missing mass which is converted to energy in the formation of nucleus, is called	A. packing fraction B. mass defect C. binding energy D. none of these