

ECAT Pre General Science Physics Chapter 21 Nuclear Physics

| Sr | Questions | Answers Choice |
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| 1 | Marie curie and Pierre curie discovered: | A. Uranium B. Polonium C. Radium D. Both (A) and (C) E. Plutonium |
| 2 | Beta particles are | A. hydrogen nuclei B. helium nuclei C. electrons D. photons |
| 3 | Nucleus consists of | A. proton and neutron B. protons and electron C. electron and neutron D. protons only |
| 4 | Referring to the above figure, the binding energy per nucleon increases upto mass number equal to: | A. 50 B. 100 C. 150 D. 200 E. 250 |
| 5 | The half life of radioactive substances depends upon | A. amount of substance B. energy of substance C. state of substance D. temperature of substance |
| 6 | When thorium nucleus emits α -particle, the daughter nucleus is called: | A. Protactinium B. Actinium C. Uranium D. Radium E. Redon |
| 7 | For an atom having atomic number Z and atomic weight A, the number of electron in an atoms | A. A - Z B. A + Z C. Z D. A |
| 8 | The number if neutrons in the nucleus of ${}_{92}\text{U}^{235}$ are | A. Infinite B. 92 C. 235 D. 143 |
| 9 | There is present in paraffin a large amount of: | A. Nitrogen B. Hydrogen C. Carbon D. Baryllium E. Lithium |
| 10 | Charge on neutron is | A. 1.6×10^{-19} C B. zero C. -1.6×10^{-19} C D. 1.2×10^{-19} C |
| 11 | The number of isotopes of hydrogen are | A. 2 B. 1 C. 3 D. 4 |
| 12 | A pair of quark and antiquark makes a: | A. Meson B. Baryon C. Proton D. Neutron E. None of these |
| 13 | When radioactive nucleus emits α -particle, the proton-neutron ratio | A. decrease B. increase C. same D. none of these |
| 14 | A mass difference of 0.0012 u is equivalent to and energy of: | A. 0.5 Me V B. 1.13 MeV C. 5.13 MeV D. 1.13 keV E. 1.13 eV |

E. 1.13 eV

15 Curie is a unit of

- A. reluctance
- B. resistivity
- C. binding energy
- D. radioactivity

16 After alpha decay the atomic number of the atom

- A. increase by four
- B. decreases by two
- C. increases by two
- D. decrease by four

17 γ -rays are

- A. electrostatic waves
- B. electromagnetic waves
- C. heavy particles
- D. longitudinal waves

18 Mass of proton is

- A. 1.67×10^{-27} kg
- B. 1.67×10^{-31} kg
- C. 1.66×10^{-34} kg
- D. 1.67×10^{-17} kg

19 Which of the following material has smaller has life

- A. uranium
- B. polonium
- C. radium
- D. radian

20 Alfa , beta and gamma rays are emitted from a radio-active substance

- A. spontaneously
- B. when it is heated
- C. when it is exposed to light
- D. When it interacts with the other particle