DISCOVERY AND PROPERTIES OF ANODE, CATHODE RAYS NEUTRON AND NUCLEAR STRUCTURE

1. A neutral atom (Atomic no. > 1) consists of
(a) Only protons
(b) Neutrons + protons
(c) Neutrons + electrons
(d) Neutron + proton + electron

2. The nucleus of the atom consists of
(a) Proton and neutron
(b) Proton and electron
(c) Neutron and electron
(d) Proton, neutron and electron

3. The size of nucleus is of the order of
(a) $10^{-12}m$ (b) $10^{-8}m$
(c) $10^{-15}m$ (d) $10^{-10}m$

4. Positive ions are formed from the neutral atom by the
(a) Increase of nuclear charge
(b) Gain of protons
(c) Loss of electrons
(d) Loss of protons

5. The electron is
(a) α -ray particle
(b) β -ray particle
(c) Hydrogen ion
(d) Positron

6. Who discovered neutron
(a) James Chadwick
(b) William Crooks
(c) J.J. Thomson
(d) Rutherford

7. The ratio of charge and mass would be greater for
(a) Proton (b) Electron
(c) Neutron (d) Alpha

8. Magnitude of *K.E.* in an orbit is equal to
(a) Half of the potential energy
(b) Twice of the potential energy
(c) One fourth of the potential energy
(d) None of these

9. The density of neutrons is of the order
(a) $10^{3}kg/cc$ (b) $10^{6}kg/cc$
(c) $10^{9}kg/cc$ (d) $10^{11}kg/cc$

10. The discovery of neutron becomes very late because
(a) Neutrons are present in nucleus
(b) Neutrons are highly unstable particles
(c) Neutrons are chargeless
(d) Neutrons do not move

11. The fundamental particles present in the nucleus of an atom are
(a) Alpha particles and electrons
(b) Neutrons and protons
(c) Neutrons and electrons
(d) Electrons, neutrons and protons

12. The order of density in nucleus is
(a) $10^{8}kg/cc$ (b) $10^{-8}kg/cc$
(c) $10^{-9}kg/cc$ (d) $10^{12}kg/cc$

13. Cathode rays are
(a) Protons (b) Electrons
(c) Neutrons (d) α -particles

14. Number of neutron in C^{12} is
(a) 6 (b) 7
(c) 8 (d) 9

15. Heaviest particle is
(a) Meson (b) Neutron
(c) Proton (d) Electron

16. Penetration power of proton is
(a) More than electron
(b) Less than electron
(c) More than neutron
(d) None

17. An elementary particle is
(a) An element present in a compound
(b) An atom present in an element
(c) A sub-atomic particle
(d) A fragment of an atom

18. The nucleus of helium contains
(a) Four protons
(b) Four neutrons
(c) Two neutrons and two protons
(d) Four protons and two electrons

19. Which is correct statement about proton
(a) Proton is nucleus of deuterium
(b) Proton is ionized hydrogen molecule
(c) Proton is ionized hydrogen atom
(d) Proton is α -particle

20. Cathode rays are made up of
(a) Positively charged particles
(b) Negatively charged particles
(c) Neutral particles
(d) None of these

21. Anode rays were discovered by
(a) Goldstein
(b) J. Stoney
(c) Rutherford
(d) J.J. Thomson