

- Q.9 Who discovered the existence of neutrons?
- (1) Chadwick (3) Anderson
(2) Fermi (4) Rutherford
- Q.10 The size, shape, mass defect and binding energy are the ----- of nucleus
- (1) dynamic characteristics (3) chemical characteristics
(2) physical characteristics (4) static characteristics
- Q.11 Nuclear magnetic moment is usually measured in the unit of -----.
- (1) nuclear magneton (3) Fermi
(2) barn (4) Mev
- Q.12 The electrical quadrupole moment of nucleus increases with increase of -----
- (1) protons (3) both protons or neutrons
(2) neutrons (4) electrons
- Q.13 If M is the atomic mass and A is the mass number then $M - A$ is called -----
- (1) packing fraction (3) binding energy
(2) mass defect (4) Fermi energy
- Q.14 Formation of compound nucleus is analogous to the -----
- (1) evaporation of a liquid drop (3) latent heat of vaporization
(2) condensation of liquid drop (4) surface tension of a liquid
- Q.15 Semi-empirical binding energy formula for the nucleus is proposed by -----
- (1) M. V. Weizsacker (3) Rutherford
(2) Anderson (4) C. V. Weizsacker
- Q.16 A nuclide with odd number of protons and odd number of neutrons are ----
- (1) most stable (3) less stable
(2) least stable (4) intermediate stable
- Q.17 α -disintegration energy is nothing but -----
- (1) Q value (3) K.E. of α -particle
(2) potential energy (4) total energy
- Q.18 Internal conversion is the emission by γ -rays of ----
- (1) electron (3) neutron
(2) positron (4) proton
- Q.19 Neutrino has ----charge.
- (1) zero (3) negative
(2) positive (4) infinite
- Q.20 Neutrino hypothesis was postulated by -----
- (1) Pauli (3) Rutherford
(2) Max Planck (4) Thomson

- Q.21 For K-electron capture to occur, the nucleus must be ---rich.
(1) electron (3) neutron
(2) proton (4) K-electron
- Q.22 Helium nuclei are called ---particles.
(1) gamma (3) beta
(2) alpha (4) x-ray
- Q.23 γ -rays are ----- radiations.
(1) alpha (3) electromagnetic
(2) beta (4) X-ray
- Q.24 ---particles are negatively charged particles.
(1) alpha (3) gamma
(2) beta (4) neutron
- Q.25 In stripping reaction the product nucleus differs from the target nucleus -----
(1) atomic no. (3) both atomic no and mass no.
(2) mass no. (4) neither mass no. nor atomic no.
- Q.26 The bombarding particle in nuclear reaction is called-----
(1) product (3) striker
(2) target (4) projectile
- Q.27 In endothermic nuclear reaction the Q – value should be -----
(1) Positive (3) zero
(2) negative (4) none of the above
- Q.28 Positron was discovered by-----
(1) Anderson (3) Rutherford
(2) Chadwick (4) Einstein
- Q.29 Cosmic rays were discovered by-----
(1) Anderson (3) Rutherford
(2) Hess (4) Chadwick
- Q.30 The charge on hyperon -----
(1) is always positive (3) is always negative
(2) is zero (4) may be positive or negative