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

22. The radius of an atom is of the order of
(a) $10^{-10}cm$ (b) $10^{-13}cm$
(c) $10^{-15}cm$ (d) $10^{-8}cm$

23. Neutron possesses
(a) Positive charge
(b) Negative charge
(c) No charge
(d) All are correct

24. Neutron is a fundamental particle carrying
(a) A charge of +1 unit and a mass of 1 unit
(b) No charge and a mass of 1 unit
(c) No charge and no mass
(d) A charg of –1 and a mass of 1 unit

25. Cathode rays have
(a) Mass only
(b) Charge only
(c) No mass and charge
(d) Mass and charge both

26. The size of nucleus is measured in
(a) amu (b) Angstrom
(c) Fermi (d) cm

27. Which phrase would be incorrect to use
(a) A molecular of a compound
(b) A molecule of an element
(c) An atom of an element
(d) None of these

28. Which one of the following pairs is not correctly matched
(a) Rutherford-Proton
(b) J.J. Thomsom-Electron
(c) J.H. Chadwick-Neutron
(d) Bohr-Isotope

29. Proton was discovered by
(a) Chadwick (b) Thomson
(c) Goldstein (d) Bohr

30. The minimum real charge on any particle which can exist is
(a) $1.6 \times 10^{-19} Coulomb$
(b) $1.6 \times 10^{-10} Coulomb$
(c) $4.8 \times 10^{-10} Coulomb$
(d) Zero

31. The nature of anode rays depends upon
(a) Nature of electrode (b)Nature of residual gas

(c) Nature of discharge tube
(d) All the above

32. One would expect proton to have very large
(a) Ionization potential
(b) Radius
(c) Charge
(d) Hydration energy

33. The mass of a mol of proton and electron is
(a) $6.023 \times 10^{23} g$
(b) $1.008 g$ and $0.55 mg$
(c) $9.1 \times 10^{-28} kg$
(d) $2 gm$

34. The average distance of an electron in an atom from its nucleus is of the order of
(a) $10^{6} m$ (b) $10^{-6} m$
(c) $10^{-10} m$ (d) $10^{-15} m$

35. The mass of 1 mole of electrons is
(a) $9.1 \times 10^{-28} g$ (b) $1.008 mg$
(c) $0.55 mg$ (d) $9.1 \times 10^{-27} g$

36. The ratio of specific charge of a proton and an α -particle is
(a) 2 : 1 (b) 1 : 2
(c) 1 : 4 (d) 1 : 1

37. Ratio of masses of proton and electron is
(a) Infinite
(b) 1.8×10^{3}
(c) 1.8
(d) None of these

38. Splitting of signals is caused by
(a) Proton (b) Neutron
(c) Positron (d) Electron

39. The proton and neutron are collectively called as
(a) Deutron (b) Positron
(c) Meson (d) Nucleon

40. Which of the following has the same mass as that of an electron
(a) Photon (b) Neutron
(c) Positron (d) Proton

41. What is the ratio of mass of an electron to the mass of a proton
(a) 1 : 2 (b) 1 : 1
(c) 1 : 1837 (d) 1 : 3