

ST. LAWRENCE HIGH SCHOOL A JESUIT CHRISTIAN MINORITY INSTITUTION

WORKSHEET-26(CLASS-11) TOPIC- STRUCTURE OF ATOM

SUBTOPIC-BASIC CONCEPTS



SUBJECT – CHEMISTRY DURATION – 30 mins F.M. - 15 DATE -25.07.20

- 1.1 Which of the following atoms has a non-spherical outermost orbital? $\ensuremath{\mathsf{d}}$
- a) H b) Li c) Be d) B

1.2 In Lyman series an electron jumps from higher energy level to-a

- (a) K energy level(b) M energy level(c) N energy level(d) L energy level
 - 1.3 The wavelength of a moving electron-c

(a) is equal to that of light(b) remains constant with velocity(c) decreases with an increasing velocity(d) increases with an decreasing velocity

1.4 Bohr's concept of the orbit in an atom was contradicted by- ${\rm b}$

(a) de Broglie relationship(b) Uncertainty principle(c) Planck's -

1.5The velocity of a photon is-d

(a)Dependent on its wavelength (b) dependent on its source (c) equal to cube of its amplitude(d) independent of its wavelength

1.6 Among the following ions, which are has the highest paramagnetism?b (a) [Cr(H2O)6]⁺³(b) [Fe(H2O)6]⁺²(c) [Cu(H2O)6]⁺²(d) Zn(H2O)6]⁺²

1.7 In the case of atomic spectrum of hydrogen which series of lines lie in the visible region? ${\rm b}$

(a) Balmer(b) Paschen (c) Pfund(d) None of these

1.8 When the electron is excited from K level to M level we get- d

a) y- rays b) cathode raysc) continuous spectra d) absorption spectra

1.9 Davisson and Germer gave an experimental evidence for- d

a) Wave nature of electronb) particle nature of electronc) particle nature of lightd) wave nature of light

1.10 The size of nucleus is- c (a) 10^{-12} m (b) 10^{-8} m (c) 10^{-15} m (d) 10^{-10} m

1.11 The number of unpaired electrons in the ground state of chromium is- b (a) 1 b) 6 c) 7 d) 2

1.12 The wavelength of an electron moving with a velocity $5 \times 10^5 \text{m sec}^{-1} \text{ is}(\text{h=6.63} \times 10^{-34} \text{ kg m}^2 \text{ sec}^{-1})5 \times 10^5 \text{m sec}^{-1} \text{ is}(\text{h=6.63} \times 10^{-34} \text{ kg m}^2 \text{ sec}^{-1}) - \text{d}$ (a) $11.6 \times 10^{-5} \text{mb}$) $11.6 \times 10^{-9} \text{m}^{-1}$ c) $14.6 \times 10^{-5} \text{md}$) $1.46 \times 10^{-9} \text{m}$

1.13 The orbitals with maximum number of possible orientation is-c (a) s b) pc)d d) f

1.14 If value of h is taken as 10^{-34} kg m² sec⁻¹, the de-Broglie wavelength of a particle of mass 10^{-31} Kg having velocity 10^{9} cm sec⁻¹ is- c a) 0.01 mb) 2 nmc) 0.1 nmd) 15Å

1.15 The maximum number of electrons that can be accommodated by an atom in g-subenergy level are- c (a) 20b) 25 c) 18d) 12

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