



ST. LAWRENCE HIGH SCHOOL

A JESUIT CHRISTIAN MINORITY INSTITUTION

SOLUTION-28(CLASS-11)

TOPIC- STRUCTURE OF ATOM

SUBTOPIC-BASIC CONCEPT

SUBJECT – CHEMISTRY

DURATION – 30 mins



F.M. - 15

DATE -01.08.20

1.1 Wave nature of electron was explained by-

- a) De- Broglie b) Heisenberg c) Paulid) Newton

Ans. a

1.2 With increase in E_k (Kinetic Energy), the wavelength of the moving electron-

- (a) Increase (b) Decreases(c)Remains unchanged(d) Can't be predicted

Ans. b

1.3 An electron has-

- (a) Only wave nature(b) Only particle nature(c) None of these(d) Both wave and particle nature

Ans. d

1.4 An electron can't reside inside the nucleus of an atom can be explained by-

- (a)Uncertainty principle (b) Planck's model (c)Bohr's model(d) Both b and c

Ans. a

1.5The value of Planck's constant is-

- (a) 6.626×10^{-31} Js (b) 6.626×10^{-34} Js(c) 6.626×10^{-43} Js(d) 6.626×10^{-39} Js

Ans. b

1.6 A dipositive ion Z^{++} has $2e^-$ in the K shell, 8 electrons in the L shell and $8e^-$ in the M shell.

Atomic number of Z is-

- (a) 19 (b) 20 (c) 16(d) 15

Ans. b

1.7 The number of unpaired electrons in a chromic ion Cr^{+2} (atomic number 24) is-

- (a) 6 (b) 4 (c) 3(d) 1

Ans. b

1.8 De- Broglie hypothesis helps to prove-

- a) Rutherford's modelb) None of thesec) Planck's model d) Bohr's theory of quantisation

Ans. d

1.9 The ion that is isoelectronic with NO is-

- a) CN^- b) O^{2+} c) O^{2-} d) N_2^-

Ans. d

1.10 The fundamental particle that has least mass is-

- (a) Meson (b) alpha-particle (c) electron (d) neutron

Ans. c

1.11 The number of spectral lines obtained due to transition of an electron from $n=2$ to $n=5$ is-

- (a) 10 (b) 12 (c) 9 (d) 11

Ans. a

1.12 The shortest wavelength is obtained for the transition-

- (a) $n=2$ to $n=\infty$ (b) $n=2$ to $n=3$ (c) $n=2$ to $n=4$ (d) $n=2$ to $n=5$

Ans. a

1.13 Which of the following series falls within the visible region?

- (a) Balmer (b) Lyman (c) Humphreys (d) Pfund

Ans. a

1.14 The longest wavelength is obtained for the transition-

- (a) $n=2$ to $n=\infty$ (b) $n=2$ to $n=3$ (c) $n=2$ to $n=4$ (d) $n=2$ to $n=5$

Ans. d

1.15 Find the number of unpaired electrons present in Mn^{2+} :

- (a) 6 (b) 4 (c) 5 (d) 3

Ans. c

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