



ST. LAWRENCE HIGH SCHOOL

A JESUIT CHRISTIAN MINORITY INSTITUTION

WORKSHEET-27(CLASS-11)

TOPIC-STRUCTURE OF ATOM

SUBTOPIC-BASIC CONCEPT

SUBJECT – CHEMISTRY

DURATION – 30 mins

F.M. - 15

DATE -27.07.20



1.1 For a given energy level the number of orbitals is equal to-a

- a) n^2 b) $2l+1$ c) $4(2l+3)$ d) $2n$

1.2 The atomic number of an element having the valence shell electronic configuration $4s^2 4p^6 4d^2 4f^6$ is- a

- (a) 35 (b) 26 (c) 23 (d) 34

1.3 The relationship between energy of a radiation and its frequency was given by-c

- (a) Planck (b) Rutherford (c) Einstein (d) Joule

1.4 In an atom of hydrogen, which of the following orbital has the lowest energy for an electron present in it? b

- (a) 3s (b) 2p (c) 4p (d) 2s

1.5 The possible values of l for an s orbital are- d

- (a) -1, +1 (b) 0 to 2 (c) -2 and +1 (d) 0

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- b

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

1.7 The number of unpaired electrons in a chromic ion Cr^{+3} (atomic number 24) is- c

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

1.8 The interrelationship between matter and energy was given by- c

- a) Rutherford (b) Joule (c) de Broglie (d) Einstein

1.9 The ion that is isoelectronic with CO is- a

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

1.10 The fundamental particle that has least mass is- c

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

1.11 Mass of positron is the same to that of- c

(a) Proton b) meson c) electron d) neutron

1.12 The exchange of particles considered responsible for keeping the nucleons together are- a

(a) Meson b) electron c) positron d) neutron

1.13 Charge on an electron was shown by – a

(a) J. J. Thomson b) Kirchoff c) Ohm d) Max Planck

1.14 The electronic configuration of Hg is: a

a) $1s^2 2s^2 p^6 3s^2 p^6 d^{10} 4s^2 p^6 d^{10} f^{14} 5s^2 p^6 d^{10} 6s^2$ b) $1s^2 2s^2 p^6 3s^2 p^6 d^{10} 4s^2 p^6 d^{10} f^{14} 5s^2 p^6 d^{10} 7s^2$

c) $1s^2 2s^2 p^6 3s^2 p^6 d^{10} 4s^2 p^6 d^{10} f^{14} 5s^2 p^6 d^{10} 8s^2$ d) $1s^2 2s^2 p^6 3s^2 p^6 d^{10} 4s^2 p^6 d^{10} f^{14} 5s^2 p^6 d^9 6s^3$

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

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

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