# ST. LAWRENCE HIGH SCHOOL

A JESUIT CHRISTIAN MINORITY INSTITUTION

FOR GOD AND COUNTRY

## WORKSHEET-21(CLASS-11)

**TOPIC- STRUCTURE OF ATOM**

**SUBTOPIC-ELECTRONIC CONFIGURATION (PART-2)**

**SUBJECT – CHEMISTRY** **F.M. - 15**

**DURATION – 30 mins** **DATE -09.07.20**

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1.1 **Which principle states that no two electrons can have the same set of all four quantum numbers-**

a) Aufbau b) Pauli c) Einstein d) Hund

1.**2 Electronic configuration of the outer shell of the element Pt with atomic number 78 is:**

**(a)**[Xe] $4f^{14}\,5d^{9}\,6s^{1}$ **(b)**[Xe] $4f^{13}\,5d^{10}\,6s^{1}$ **(c)** [Xe] $4f^{12}\,5d^{9}\,6s^{2}$ **(d)** [Xe] $4f^{14}\,5d^{10}\,6s^{2}$

1.3 **Maximum number of electrons in a subshell can be:**

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

1.4 **The quantum number that determines the rotation property of an electron-**

(a) Spin quantum number(b)magnetic quantum number(c) azimuthal quantum number

(d) Principal quantum number

1.5**Number of unpaired electrons in $Zn^{2+}$:**

(a)3(b) 1(c) 2 (d) 0

1.6 **Which among the following can also be considered as (n+l) rule?**

(a) Hund's rule(b) Pauli's exclusion principle(c) Aufbau Principle (d) None of these

1.7 **Degeneracy is not observed for-**

(a) s-orbital (b) p-orbitals(c) d-orbitals(d) f-orbitals

1.8 **For a principal quantum number n, how many atomic orbitals are possible?**

a) $n^2$b) n+ lc) 2n d) n

1.9 **The typical electronic configuration of Cr and Cu can be explained by considering-**

a) Exchange energy b) Spin multiplicity c) Orbital angular momentum d) Inert pair effect

1.10**Element Z has the ground state electronic configuration $1s^2 2s^2 2p^4$. In which group does it belong?**

(a) 5 (b) 15 (c) 14(d) 13

1.11 **A set of orbitals for which the quantum number l = 3 is:**

(a) 7-fold degenerate b) non-degenerate c) 3-fold degenerated) 5-fold degenerate

1.12 **For the principal quantum number n = 5, it is possible to have:**

(a) only s and p orbitalsb) only s, p, d and f orbitals c) only an s orbitald) only s, p and d orbitals

1.13 **The electronic configuration of Pd is:**

(a)[Kr] $4d^{10}$b) [Kr] $4d^{7}5s^{3}$c) [Kr] $4d^{8}5s^{2}$ d)None of these

1.14 **The electronic configuration of is:**

a) [Kr] $4f^{7}5d^{10}6s^{1}$b) [Kr] $4f^{7}5d^{10}6s^{1}$c) [Kr] $4d^{3}$ $5s^{2}$d) [Kr] $4f^{14}5d^{10}6s^{2}$

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

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

**PREPARED BY:** MR. ARNAB PAUL CHOWDHURY