Date: 04-12 2024

LGS GROUP OF COLLEGES

MONTHLY TEST #2 CHEMISTRY XI M#2

M

MT2

Paper Code:1908	Name: ……	Roll No:
TOPIC: CH#5	Objective + Subjective	Marks =35, Time: 1 HOUR

SECTION-I OBJECTIVE TYPE (TIME 10 MINUTES)

Note: Four possible answers A, B, ,C and D to each question are given. The choice which you think is correct, fill the circle in front of that question with Marker or Pen ink in the answer book. Cutting or filling two or more circles will result in zero mark in that question. (1x11=11)

i. When 6d orbital is complete, the entering electron goes into**;**

a) 7f b) 7s

c) 7p d) 7d

ii. The wave number of the light emitted by a certain source is $2\times10^{6}m^{-1}$. The wavelength of this light will be.

a) 500 nm b) 500m

c) 200nm d) 5×107

iii. Orbitals having same energy are called:

a) Hybrid orbital b) Valence orbital

c) Degenerate orbital d) d-orbital

iv. In the ground state of an atom, the electron is present

a) In the second shell b) farthest from the nucleus

c) Nearest to the nucleus d) In the nucleus

v. The e/m value for the positive rays is maximum for

a) Hydrogen b) Helium

c) Oxygen d) Nitrogen

vi. Balmer Series in hydrogen spectrum lies in the region

a) UV b) Visible

c) IR d) Microwave

vii. The liming line of Balmer Series lies in the region

a) Visible b) U.V

c) Near IR d) For I.R

viii. When the azimuthal quantum no is 3, then m can have value

a) 5 Value b) 7 Value

c) 2 Value d) 3 Value

ix. What is the value of (n+l) for 3s sub-shell

a) 2 b) 1

c) 5 d) 3

x. The d-sub shells consists of

a) 5-orbital b) 6-orbital

c) 7-orbtial d) 10-orbital

xi. The e/m value for the positive rays is maximum for

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c) Oxygen d) Nitrogen

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Part – I

Q2. Write short answers of the following questions. (8x2=16)

i. State Moseley's law with its mathematical form?

ii. Define Heisenberg's principle of uncertainty and give its mathematical expression?

iii. Differentiate between Stark and Zeeman Effect?

iv. State Aufbau's principle and (n + l) rule.

v. Differentiate between frequency and wave number?

vi. What are Nuclear Reactions? Write equation for a Nuclear Reaction for the production of Neutron

vii. Differentiate between line spectrum and continuous spectrum?

viii. Differentiate between atomic emission and atomic absorption spectrum?

ix. Electron has dual nature, Justify?

x. Compare orbit and orbital?

xi. The distance gaps between different orbits go to increasing from the lower to the higher orbits. Give reason?

xii. How the K-series, L-series and M-series of X-rays spectrum are produced

PART II

Attempt Any One Questions. (4x2=8 marks)

Q NO 3(a): Give the defects of Bohr's atomic model.

(b): Drive an expression for the radius of nth Bohr's orbital of H atom.

Q NO 4(a): Discuss the properties of Cathode Rays.

(b): Describe Millikan's oil drop method for the measurement of charge on Electron.