

V.P.M's B. N. Bandodkar College of Science, Thane

F.Y.J.C Second Terminal Examination January 2020

Subject: Chemistry

Date: 15.01.2020

Time: 02.30 pm to 04.00 pm

Day: Wednesday

Marks: 25

Note: General instructions: The question paper is divided into four sections.

- 1) Section A: Q. No.1 contains four MCQ type questions carrying one mark each Q. No. 2 contains three very short answer type questions carrying one mark each.
- 2) Section B: Q. No. 3 to Q. No.8 contains six short answer type questions carrying TWO marks each out of which four is to be attempted.
- 3) Section C: Q. No. 9 to Q. No.11 contains three short answer type questions carrying THREE marks each out of which two is to be attempted.
- 4) Section D: Q. No. 12 and Q. No.13 contains two long answer type questions carrying FOUR marks each out of which one is to be attempted.
- 5) Use of log table is allowed. Use of calculator is not allowed.
- 6) Figure to the right indicates full marks.

Section - A

Q.1 Select and write the correct answer. 04

- i. Oxidation number of oxygen in superoxide is
a) - 2 b) -1 c) -1/2 d) 0
- ii. The Lanthanoids are placed in the periodic table at
a) Left hand side b) Right hand side c) Middle d) Bottom
- iii. Which of the following halogen always show oxidation state as - 1.
a) Fluorine b) Chlorine c) Bromine d) Iodine
- iv. d - block elements are also known as
a) transition elements b) inert gas elements
c) normal elements d) inner transition elements

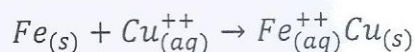
Q.2 Answer the following: 03

- i. Name the shortest period in the periodic table.
- ii. Write the formula of amphoteric oxide.
- iii. Write the stock notation for the following compound - AuCl_3

Section - B

Attempt any **FOUR**:- 08

- Q.3 Write characteristic of s - block elements.
- Q.4 Identify the oxidizing and reducing agent in the following reaction:



- Q.5 Valence shell electronic configuration of the elements ${}_{56}\text{X}_e$ is $5s^2 5p^6$. Identify the period and group.
- Q.6 Draw a neat and labelled diagram of Daniel cell.

Q.7 Write the general electronic configuration of : (a) s - block (b) p - block elements.

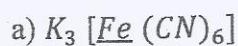
Q.8 What is the change in oxidation state of C in the following reaction.



06

Attempt any TWO:

Q.9 Calculate the oxidation number of



Given : Oxidation state of K = +1, O = -2, H = +1, CN = -1

Q.10 Name the two series that constitute the f - block elements. Also name the group to which the two series belong.

Q.11 How does the following factors affect electron affinity (Electron gain enthalpy).

a) Atomic size

b) Nuclear size

c) Screening effect

Section - D

Attempt any ONE :-

04

Q.12 From the elements Mg, Ar, Cl, Li, P and S choose that fits each of the below given description

i) An element having two valence electrons

ii) A noble gas

iii) An element having electronic configuration $1s^2 2s^2 2p^6 3s^2 3p^3$

iv) An alkali metal.

Q.13 Define the following term:

i) Oxidation

ii) Reduction

iii) Oxidising agent

iv) Reducing agent

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