



DELHI PUBLIC SCHOOL NEWTOWN
SESSION: 2023-24
MONDAY TEST

CLASS : IX
SUBJECT : CHEMISTRY

FULL MARKS : 40
DATE: 10.07.2023

General Instructions:

- The paper consists of three printed pages.
- Answers should be to the point.
- Question numbers should be copied carefully while answering the questions.

Question: 1

Choose the correct answer from the options given below:

[5]

- (i) The substance used to remove hydrogen sulphide from hydrogen :
- A. Lead nitrate solution
 - B. Sodium chloride solution
 - C. Silver nitrate solution
 - D. Anhydrous calcium chloride
- (ii) Which of the following nitrate on heating leaves no residue?
- A. Sodium nitrate
 - B. Ammonium nitrate
 - C. Zinc nitrate
 - D. Copper nitrate
- (iii) Which of the following has no neutrons:
- A. Helium ion
 - B. Deuterium
 - C. Protium
 - D. Tritium
- (iv) The noble gas has duplet arrangement:
- A. Helium
 - B. Neon
 - C. Krypton
 - D. Argon
- (v) The compound which slows down the rate of decomposition of hydrogen peroxide is:
- A. Phosphoric acid
 - B. Nitric acid
 - C. Hydrochloric acid
 - D. Sulphuric acid

Question: 2

Name the following:

[5]

- (i) A compound which on decomposition produces a reddish brown gas.
- (ii) The impurity associated with granulated zinc which acts as a catalyst in the laboratory preparation of hydrogen.

- (iii) A gas which turns moist lead acetate paper silvery black.
- (iv) Atoms of same element having same atomic number but different mass numbers.
- (v) A metallic nitrate which on heating produces oxygen as the only gaseous product.

Question: 3

Give reasons for the following:

[5]

- (i) Neon is chemically inert.
- (ii) Silver salts are stored in dark coloured reagent bottles.
- (iii) Actual atomic mass of an element is greater than its mass number.
- (iv) Nitric acid is not used in the laboratory preparation of hydrogen.
- (v) The electronic configuration of calcium is 2,8,8,2 and not 2,8,10

Question: 4

Write the formula of the following compounds:

[5]

- (i) Sodium thiosulphate
- (ii) Calcium nitride
- (iii) Aluminium phosphate
- (iv) Lead acetate
- (v) Potassium zincate

Question: 5

Write balanced chemical equation for the following reactions which takes place under the following condition:

[5]

- (i) A reaction that takes place under high pressure
- (ii) A reaction which takes place in presence of electricity.
- (iii) A precipitation reaction in which a yellow precipitate is formed.
- (iv) A reaction which takes place in presence of light.
- (v) A reaction which proceeds with evolution of heat

Question: 6

An orange crystalline solid [A] on heating produces a neutral oxide [B], a colourless, odourless gas [C] and leaves behind a fluffy green residue [D].

[5]

- (i) Identify A, B, C and D.
- (ii) Write balanced chemical equation in support of your answer.

Question: 7

- a) Calculate the percentage of water of crystallization in $\text{CuSO}_4 \cdot 5\text{H}_2\text{O}$
[Cu = 64, S = 32, O = 16, H = 1]

- b) Complete the following equations and identify as oxidation or reduction:

- (i) $\text{S} + \underline{\quad} \rightarrow \text{S}^{2-}$
- (ii) $\text{Mn}^{7+} + \underline{\quad} \rightarrow \text{Mn}^{4+}$
- (iii) $\text{Cr} \rightarrow \text{Cr}^{3+} + \underline{\quad}$

[5]

Question: 8

With respect to industrial preparation of hydrogen answer the following:

- (i) Name the process.
- (ii) Write the equation for the endothermic process.
- (iii) Name the catalyst and the promoter used in this process,
- (iv) Write balanced equation for the catalysed reaction.

[5]