



ST. JOSEPH'S COLLEGE, PRAYAGRAJ

SECOND UNIT TEST 2024

CHEMISTRY

CLASS – IX

TIME: 1 Hour

MM: 30

Attempt all the questions

Q 1) Fill in the blanks with the choices given in brackets:

[2]

- 1) The outermost shell around a nucleus cannot have more than _____ electrons. [eight/two]
- 2) Temperature of an enclosed gas remaining constant, its pressure is _____ [directly /inversely] proportional to its volume.
- 3) In the atom of argon ${}_{18}^{40}\text{Ar}$ the number of neutrons are _____. [20/18/22]
- 4) When thunder and lightning take place the nitrogen and oxygen present in air reacts to form _____ gas which is acidic in nature. [nitrous oxide/ nitrogen dioxide]

Q 2) Choose the correct answer from the options given below:

[2]

- 1) Which is not a greenhouse gas:
a. Carbon dioxide
b. Carbon monoxide
c. Nitrous oxide
d. Ozone
- 2) The temperature of a gas on kelvin scale is 73 K. The corresponding temperature on Celsius scale is:
a. -73°C
b. 346°C
c. -200°C
d. 0°C
- 3) Which of the following do not form ionic bond?
a. CaCl_2
b. NH_3
c. MgCl_2
d. KCl
- 4) When a metal atom becomes an ion:
a. It loses electron and is oxidised
b. It gains electrons and is reduced
c. It gains electron and is oxidised
d. It loses electron and is reduced

Q 3) Identify the following:

[3]

- 1) A covalent compound in which the shared pairs of electrons are equally distributed between two atoms.
- 2) Temperature at which molecules of an enclosed dry gas at constant pressure have zero kinetic energy.
- 3) The protons and neutrons are together termed as.

Q 4) What do you observe when the following compounds are heated strongly:

[3]

- 1) Zinc nitrate
- 2) Ammonium dichromate
- 3) Blue vitriol

Q 5) How is acid rain caused? Name the three gases responsible for global warming.

[2]

Q 6) 279 cm^3 of gas at 87°C is cooled to standard temperature at constant pressure. Calculate the volume of gas at standard temperature. 211-6

[2]

Q 7) 1) Write the reaction for the formation of ozone in the atmosphere?

[2]

2) Name any two compounds which destroys the ozone layer.

Q 8) Draw the orbital diagram of sodium chloride.

[2]

Q 9) Differentiate between electrovalent bond and covalent bond.

[2]

Q 10) Draw the isotopes of hydrogen and mention the number of protons and neutrons.

[3]

Q 11) Draw the orbital diagram for the following compounds:

[3]

- 1) Water
- 2) Nitrogen molecule
- 3) Methane

Q 12) An element is represented by symbol ${}_{15}^{31}\text{X}$

[4]

- 1) What is the mass number and atomic number of element X?
- 2) Name its valence shell and number of electrons in the valence shell.
- 3) Find the number of protons, electrons and neutrons.
- 4) Is the element a metal or a non-metal?