

Doon Public School

A Senior Secondary School
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Assignment – 5

Subject: Science

Class: IX

Date: 17-10-2018

Q1. An ion M^{3+} contains 19 electrons and 14 neutrons. What are the atomic number and mass number of the element M? Name the element.

Q2. An ion X^{2-} contains 10 electrons and 8 neutrons. What are the atomic number and mass number of the element X? Name the element.

Q3. Number of protons, neutrons and electrons in four species A, B, X and Y are respectively 6,6,6 ; 7,7,7,6,8,6 and 9,10,10. Give symbolic representation of each species and tell which of them are isotopes and which are isobars?

Q4 ${}_{86}^{222}\text{Rn}$ is an isotope of noble gas, radon. How many protons, neutrons and electrons are there in one atom of this radon isotope?

Q5. Write the electronic configuration and valency of the following;

(i) Chlorine (ii) Sodium (iii) Silicon

(iv) Magnesium (v) Neon (vi) Sulphur.

Q6 Why do isotopes show similar chemical properties?

Q7 A ball is thrown up with the velocity of 19.6 m/s. How long will it take to reach the maximum height? How high will it go?

Q8 Write three differences between gravitational acceleration (g) and gravitational constant (G).

Q9 What happens to the magnitude of the force of gravitation between two objects if distance between the objects is tripled?

Q10 Define atomic number, mass number, isotopes, isobars and valency.