

Class: X
Subject: chemistry
Topic: classification of elements
No. of Questions: 20
Duration: 60 Min
Maximum Marks: 60

Question1: The properties of an element in the periodic table depends on its, _____.

1. atomic size
2. atomic mass
3. electronic configuration
4. number of protons

Answer: 3. According to modern periodic law

Question 2: An element has configuration 2, 8, 1. It belongs to, _____.

1. 1 group and 3rd period
2. 3 group and 1st period
3. 1 group and 8th period
4. 17 group and 3rd period

Answer: 1. No. of shell tells the period and no. of last e- tells the group.

Question 3: The number of electrons in the valence shell is equal to its _____.

1. atomic mass
2. group number
3. period number
4. atomic volume

Answer: 2. Fact

Question 4: The non-metallic element present in the third period other than sulphur and chlorine is _____.

1. oxygen
2. fluorine
3. nitrogen
4. phosphorus

Answer: 4

Question 5: At the end of each period the valence shell is _____.

1. incomplete
2. half filled
3. singly occupied
4. completely filled

Answer: 4

Question 6: The family of elements having seven electrons in the outermost shell is _____.

1. alkali metals
2. alkaline earth metals
3. halogens
4. noble gases

Answer: 3. They have 7 valence electrons in valence shell

Question 7: Which of the following factors does not affect the metallic character of an element?

1. Atomic size
2. Ionisation potential
3. Electronegativity
4. Atomic radius

Answer: 3. Electronegativity is the property of pulling the shared pair of electrons in bond

Question 8: The family of elements to which potassium belongs is _____.

1. alkali metals
2. alkaline earth metals
3. halogens
4. noble gases

Answer: 1

Question 9: The modern periodic table is given by _____

1. Mendeleev
2. Einstein
3. Bohr
4. Mosley

Answer: 4

Question 10: Elements belonging to groups 1 to 17 are called _____.

1. noble gases
2. normal elements
3. transition elements
4. inner transition elements

Answer: 2

Question 11: A liquid non-metal is _____.

1. phosphorous
2. mercury
3. bromine
4. nitrogen

Answer: 3

Question 12: The first alkali metal is _____.

1. hydrogen
2. lithium
3. sodium
4. francium

Answer: 2

Question 13: A purple coloured solid halogen is _____.

1. chlorine
2. bromine
3. iodine
4. astatine

Answer: 3

Question 14: Lanthanides and actinides are also called _____.

1. normal elements
2. transition elements
3. noble gases
4. inner transition elements

Answer: 4

Question 15: The family of elements to which calcium belongs is _____.

1. alkali metals
2. alkaline earth metals
3. halogens
4. noble gases

Answer: 2

Question 16: The least reactive element in group 17 is _____.

1. fluorine
2. chlorine
3. bromine
4. iodine

Answer: 4, The reactivity decreases down the group.

Question 17: The valency of chlorine with respect to oxygen is _____.

1. 1
2. 3
3. 5
4. 7

Answer: 4

Question 18: The number of shells in the elements of 3rd period is _____.

1. 1
2. 2
3. 3
4. 0

Answer: 3

Question 19: Four elements along a period have atomic number (11, 13, 16 and 17). The most metallic among these has an atomic number of _____.

1. 11
2. 12
3. 16
4. 17

Answer: 1

Question 20: Six elements A, B, C, D, E and F have the following atomic numbers (A = 12, B = 17, C = 18, D = 7, E = 9 and F = 11). Among these elements, the element, which belongs to the 3rd period and has the highest ionisation potential, is _____.

1. A
2. B
3. C
4. F

Answer: 3. C has 4 valence electrons, to remove the 4th one will be requiring highest energy among these.