

Chemistry Worksheet Class 10 on Chapter 5 Periodic Classification of Elements - Set 3

Q1. How many elements are there in the fifth period of the periodic table?

- (a) Eighteen
- (b) Thirty-two
- (c) Eight
- (d) None of the above

Q2. Fourteen elements after lanthanum are known as

- (a) Lanthanides
- (b) Actinides
- (c) d- block elements
- (d) None of the above

Q3. What is the electronic configuration of Al^{3+} ion?

- (a) 2, 8
- (b) 2, 8, 1
- (c) 2, 8, 2
- (d) 2, 8, 3

Q4. Which group elements are also known as transition metals?

- (a) s block elements
- (b) p block elements
- (c) d block elements
- (d) f block elements

Q5. A metal belongs to the first group of the modern periodic table. What is the formula of its oxide?

- (a) MO
- (b) MO_2
- (c) M_2O
- (d) None of the above

Q6. What is the basis for classifying elements of the Mendeleev periodic table?

Q7. Let X be an element with an Atomic number equivalent to nineteen. What is the formula of its chloride?

Q8. The atomic number of elements U, V, X, Y and Z are given below.

Element	U	V	X	Y	Z
Atomic Number	7	10	12	4	19

(i) Which element belongs to the 3rd period of the periodic table?

(ii) Which element among these is a non-metal?

Q9. An element belongs to group 17. It is present in the third period, and its atomic number is 17. What is the element's atomic number belonging to the same group and present in the fifth period?

Q10. Name any two elements having valency two concerning oxygen.

Q11. What is the principle of Mendeleev's periodic table?

Q12. What is a valence electron?

Q13. Name an element with double the number of electrons in its L shell than that present in its M shell.

Q14. Why was the position of hydrogen not fixed in Mendeleev's periodic table?

Q15. Name any two elements forming oxides of the types XO_3 .

Q16. The position of the five elements in the periodic table is shown below.

	Group 1	Group 2	Group 15	Group 16
Period 1		A		B
Period 3	C		D	E

(i) Identify the element which will form basic oxide?

(ii) Identify the element which will show valency three?

(iii) Identify the element which will show the greatest tendency to gain electrons?

Q17. Based on the table given in question 16 answer the following questions.

(i) What is the number of valence electrons in B?

(ii) Identify the element which will have the smallest atomic radii?

(iii) Identify the element which will be most metallic?

Q18. A non-metal A, the largest constituent of air, combines with hydrogen on heating in the presence of Fe (as a catalyst) and forms a gas B. When this gas B is treated with H_2SO_4 , compound C is formed, which is broadly used as chemical fertiliser.

(i) Identify A, B and C.

(ii) Locate the position of A in the modern periodic table.

(iii) Which elements are present before and after element A?

(iv) Write the electronic configuration of element A.

Q19. A teacher in Xth class, during teaching, explains the importance of music in our daily life. She was telling her students that in the Indian music system, there are seven musical notes in a scale sa, re, ga, ma, pa, da, ni. And in the west, notations used are do, re, mi, fa, so, la, ti. Whole frequency intervals of tones separate the notes in a scale. Every eighth note is similar to the first one, and it is the first note of the following scale. A musician uses these notes for composing the music for a song.

(i) Is the situation discussed above similar to something in chemistry? Explain.

(ii) What are the limitations of the above principle in the case of chemistry?

(iii) What values will you infer from the above passage?

Q20. The school has an assembly of students standing in rows, which is straight, horizontally, and vertical. Each class stands in a single line with schools. Each class has a unique name, e.g. class 1st, 2nd, 3rd ... etc. In general, the height of students in class 1st is most petite, and 12th is most prominent. Every student sings the prayer at the same time.

(i) Do you find any similarity between rows of assembly with the periodic table of elements?

(ii) How can you compare students' qualities with periodic table elements?

(iii) What values are taught during the assembly of school?