

Chapter-5

Worksheet-1

Q.1. Which of the following statements about the Modern Periodic Table is correct:

- (a) It has 18 horizontal rows known as Periods
- (b) It has 7 vertical columns known as Periods
- (c) It has 18 vertical columns known as Groups
- (d) It has 7 horizontal rows known as Groups
- (a) (b) (e) (d)

Q.2. Which of the given elements A, B, C, D and E with atomic number 2, 3, 7, 10 and 30 respectively belong to the same period?

- (a) A, B, C
- (b) b, C, D
- (c) A, D, E
- (d) B, D, E

Q.3. The elements A, B, C, D and E have atomic number 9, 11, 17, 12 and 13 respectively. Which pair of elements belong to the same group?

- (a) A and B

(b) B and D

(c) A and C

(d) D and E

Q.4. Where would you locate the element with electronic configuration 2, 8 in the Modern Periodic Table?

(a) Group 8

(b) Group 2

(c) Group 18

(d) Group 10

Q.5. An element which is an essential constituent of all organic compounds belongs to

(a) group I

(b) group 14

(c) group 15

(d) group 16

Q.6. Which among the following elements has the largest atomic radius?

(a) Na

(b) Mg

(c) K

(d) Ca

Q. 7. Which of the following elements would lose an electron easily?

- (a) Mg
- (b) Na
- (c) K
- (d) Ca

Q. 8. Which of the following elements does not lose an electron easily?

- (a) Na
- (b) F
- (c) Mg
- (d) Al

Q. 9. Which of the following are the characteristics of isotopes of an element?

- (i) Isotopes of an element have same atomic masses
 - (ii) Isotopes of an element have same atomic number
 - (iii) Isotopes of an element show same physical properties
 - (iv) Isotopes of an element show same chemical properties
- (a) (i), (iii) and (iv)
 - (b) (ii), (iii) and (iv)
 - (c) (ii) and (iii)
 - (d) (ii) and (iv)

Q.10. Which one of the following does not increase while moving down the group of the periodic table?

- (a) Atomic radius
- (b) Metallic character
- (c) Valency
- (d) Number of shells in an element

Q.11. What was Dobereiner's basis of classifying elements?

Q. 12. State Mendelée's Periodic Law.

Q. 13. State Newlands' Law of Octaves. What was the drawback of the Law of Octaves?

Q.14. A metal M belongs to 13th group in the Modern Periodic Table. Write the valency of the metal.

Q.15. If an element X is placed in group 14, what will be the formula and the nature of bonding of its chloride?

Q.16. Arrange the following elements in the increasing order of their metallic character Mg, Ca, K, Ge, Ga

Q.17. Name the element which is in

- (a) First group and third period
- (b) Seventeenth group and second period.

Q.18. Why did Mendeleev leave some gaps in his Periodic Table?

Q.19. State Modern Periodic Law. What is number of groups and periods in the Modern Periodic Table?

Q.20. What do you understand by the term periodicity? Does the periodicity in properties is a function of valence electrons? Illustrate.