

CLASS XI CHE CH: 3

SET 1 – Classification of Elements and Periodicity in Properties

1. The modern periodic law states that the properties of elements are a periodic function of their –
a) Atomic number b) Atomic mass c) Neutron number d) Valency
2. Who gave the modern periodic law?
a) Moseley b) Mendeleev c) Newlands d) Dobereiner
3. Mendeleev arranged the elements in order of increasing –
a) Atomic mass b) Atomic number c) Density d) Atomic radius
4. The modern periodic table is based on –
a) Atomic number b) Atomic mass c) Valency d) Electronic configuration
5. Mendeleev's periodic table was based on –
a) Atomic mass b) Atomic number c) Electron affinity d) Valence electrons
6. The horizontal rows in the periodic table are called –
a) Periods b) Groups c) Columns d) Blocks
7. The vertical columns in the periodic table are called –
a) Groups b) Periods c) Series d) Rows
8. The modern periodic table has –
a) 7 periods and 18 groups b) 8 periods and 7 groups c) 7 periods and 7 groups d) 9 periods and 18 groups
9. The first period of the periodic table contains –
a) 2 elements b) 8 elements c) 18 elements d) 32 elements
10. The second period contains –
a) 8 elements b) 2 elements c) 18 elements d) 32 elements
11. The longest period in the periodic table is –
a) 6th b) 7th c) 4th d) 3rd
12. The shortest period in the periodic table is –
a) 1st b) 2nd c) 3rd d) 4th
13. The total number of elements in the 1st period is –
a) 2 b) 8 c) 18 d) 32

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14. The elements of the same group have –
a) Same valence electrons b) Same atomic number c) Same atomic mass d) Same number of shells
15. The elements of the same period have –
a) Same number of shells b) Same valence electrons c) Same atomic mass d) Same chemical properties
16. Which element has the smallest atomic number in Group 1?
a) Hydrogen b) Lithium c) Sodium d) Potassium
17. Which element has the highest atomic number in Group 18?
a) Radon b) Xenon c) Argon d) Krypton
18. The s-block elements are those in which the last electron enters the –
a) s orbital b) p orbital c) d orbital d) f orbital
19. The p-block elements are those in which the last electron enters the –
a) p orbital b) s orbital c) d orbital d) f orbital
20. The d-block elements are also known as –
a) Transition elements b) Inner transition c) Representative d) Inert gases
21. The f-block elements are called –
a) Inner transition elements b) Transition elements c) Noble gases d) Representative elements
22. The lanthanides belong to period –
a) 6 b) 5 c) 7 d) 4
23. The actinides belong to period –
a) 7 b) 6 c) 5 d) 4
24. The number of elements in the s-block is –
a) 14 b) 10 c) 2 d) 6
25. The number of groups in the modern periodic table is –
a) 18 b) 7 c) 8 d) 9
26. The group 17 elements are known as –
a) Halogens b) Noble gases c) Alkali metals d) Alkaline earth metals
27. The group 18 elements are known as –
a) Noble gases b) Halogens c) Transition metals d) Alkali metals

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28. The group 1 elements are called –
a) Alkali metals b) Alkaline earth metals c) Halogens d) Noble gases
29. The group 2 elements are called –
a) Alkaline earth metals b) Alkali metals c) Halogens d) Transition metals
30. The d-block lies between –
a) s and p block b) p and f block c) s and f block d) none
31. The elements of group 13–18 are collectively known as –
a) p-block elements b) s-block c) d-block d) f-block
32. The transition metals belong to –
a) d-block b) f-block c) s-block d) p-block
33. The inner transition metals belong to –
a) f-block b) d-block c) s-block d) p-block
34. Which of the following is a noble gas?
a) Argon b) Chlorine c) Bromine d) Oxygen
35. The element with configuration $1s^2 2s^2 2p^6$ is –
a) Neon b) Helium c) Oxygen d) Fluorine
36. Which element has atomic number 19?
a) Potassium b) Calcium c) Sodium d) Magnesium
37. The electronic configuration of sodium is –
a) $1s^2 2s^2 2p^6 3s^1$ b) $1s^2 2s^2 2p^6$ c) $1s^2 2s^2 2p^6 3s^2$ d) $1s^2 2s^2 2p^4$
38. The number of valence electrons in magnesium is –
a) 2 b) 1 c) 3 d) 4
39. Which element belongs to group 17 and period 3?
a) Chlorine b) Fluorine c) Bromine d) Iodine
40. Which of the following has the highest atomic number in period 2?
a) Neon b) Oxygen c) Fluorine d) Nitrogen
41. The element with atomic number 3 is –
a) Lithium b) Sodium c) Beryllium d) Hydrogen
42. The atomic number of carbon is –
a) 6 b) 8 c) 12 d) 7

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43. The element with atomic number 12 is –
a) Magnesium b) Sodium c) Aluminum d) Silicon
44. The electronic configuration of chlorine is –
a) $1s^2 2s^2 2p^6 3s^2 3p^5$ b) $1s^2 2s^2 2p^6 3s^2 3p^6$
c) $1s^2 2s^2 2p^6 3s^2 3p^4$ d) $1s^2 2s^2 2p^6 3s^2 3p^3$
45. The noble gas configuration is –
a) $ns^2 np^6$ b) $ns^2 np^4$ c) $ns^2 np^5$ d) $ns^2 np^3$
46. The group 16 elements are known as –
a) Chalcogens b) Halogens c) Noble gases d) Alkali metals
47. The element with atomic number 8 belongs to –
a) Group 16 b) Group 17 c) Group 15 d) Group 14
48. The element with atomic number 7 belongs to –
a) Group 15 b) Group 16 c) Group 14 d) Group 13
49. The periodic repetition of properties of elements is due to –
a) Repetition of electronic configuration
b) Repetition of atomic mass
c) Repetition of density
d) None of these
50. The element with atomic number 20 belongs to –
a) Group 2 b) Group 1 c) Group 3 d) Group 4

Answer Key – Set 1

1-a 2-a 3-a 4-a 5-a 6-a 7-a 8-a 9-a 10-a
11-a 12-a 13-a 14-a 15-a 16-b 17-a 18-a 19-a 20-a
21-a 22-a 23-a 24-c 25-a 26-a 27-a 28-a 29-a 30-a
31-a 32-a 33-a 34-a 35-a 36-a 37-a 38-a 39-a 40-a
41-a 42-a 43-a 44-a 45-a 46-a 47-a 48-a 49-a 50-a