

CLASS XI CHE CH: 3

SET 4 – Advanced and Conceptual MCQs

1. The number of periods in the modern periodic table is –
a) 7 b) 8 c) 9 d) 10
2. The number of groups in the modern periodic table is –
a) 18 b) 8 c) 7 d) 17
3. The 6th period of the periodic table contains –
a) 32 elements b) 18 elements c) 8 elements d) 2 elements
4. The first transition series lies in period –
a) 4 b) 3 c) 5 d) 6
5. The second transition series lies in period –
a) 5 b) 4 c) 6 d) 7
6. The third transition series lies in period –
a) 6 b) 7 c) 5 d) 4
7. The fourth transition series lies in period –
a) 7 b) 6 c) 5 d) 4
8. The lanthanoids belong to period –
a) 6 b) 5 c) 7 d) 4
9. The actinoids belong to period –
a) 7 b) 6 c) 5 d) 4
10. The general electronic configuration of transition elements is –
a) $(n-1)d^{1-10} ns^{0-2}$ b) $ns^2 np^6$ c) $ns^2 np^5$ d) $ns^2 np^1$
11. The general electronic configuration of inner transition elements is –
a) $(n-2)f^{1-14} (n-1)d^{0-1} ns^2$ b) $ns^2 np^5$ c) $ns^2 np^6$ d) $ns^2 np^1$
12. The first element of each period is –
a) An s-block element b) A p-block element c) A d-block element d) An f-block element
13. The last element of each period is –
a) Noble gas b) Alkali metal c) Halogen d) Transition metal
14. In a period, as atomic number increases, metallic character –
a) Decreases b) Increases c) Remains constant d) None

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15. In a group, as atomic number increases, metallic character –
a) Increases b) Decreases c) Constant d) None
16. Atomic size across a period –
a) Decreases b) Increases c) Remains same d) None
17. Atomic size down a group –
a) Increases b) Decreases c) Same d) None
18. The first ionization enthalpy across a period –
a) Increases b) Decreases c) Constant d) None
19. The first ionization enthalpy down a group –
a) Decreases b) Increases c) Constant d) None
20. Electron affinity across a period generally –
a) Becomes more negative b) Becomes more positive c) Constant d) None
21. Electron affinity down a group generally –
a) Becomes less negative b) More negative c) Constant d) None
22. Electronegativity across a period –
a) Increases b) Decreases c) Remains same d) None
23. Electronegativity down a group –
a) Decreases b) Increases c) Constant d) None
24. Metallic character and ionization energy are –
a) Inversely related b) Directly related c) Independent d) None
25. Non-metallic character and electronegativity are –
a) Directly related b) Inversely related c) Independent d) None
26. In period 2, which has the smallest atomic radius?
a) Neon b) Lithium c) Carbon d) Fluorine
27. In period 2, which has the largest atomic radius?
a) Lithium b) Beryllium c) Boron d) Carbon
28. Which has higher ionization energy: N or O?
a) N b) O c) Both equal d) Cannot say
29. Which has more negative electron gain enthalpy: Cl or F?
a) Cl b) F c) Both equal d) None

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30. The valency of an element with configuration 2,8,1 is –
a) 1 b) 2 c) 7 d) 8
31. The valency of an element with configuration 2,8,2 is –
a) 2 b) 1 c) 3 d) 4
32. Which has higher electronegativity: O or S?
a) O b) S c) Both equal d) None
33. Which of the following has highest metallic character?
a) Cs b) Na c) K d) Li
34. Which of the following has lowest metallic character?
a) F b) Cl c) Br d) I
35. Which of the following is least electronegative?
a) Cs b) Li c) Na d) K
36. Which of the following is most electronegative?
a) F b) Cl c) O d) N
37. Which element forms cation easily?
a) Na b) Cl c) O d) F
38. Which element forms anion easily?
a) Cl b) Na c) Mg d) Al
39. Which has the highest ionization enthalpy in period 3?
a) Argon b) Chlorine c) Silicon d) Sodium
40. Which has the lowest ionization enthalpy in period 3?
a) Sodium b) Magnesium c) Aluminum d) Silicon
41. Which of the following is isoelectronic with Ne?
a) F^- b) O^{2-} c) Na^+ d) All of these
42. Which of the following is not isoelectronic with Ne?
a) Mg^{2+} b) Al^{3+} c) N^{3-} d) F
43. Which of the following pairs is isoelectronic?
a) Na^+ and F^- b) Na and F c) O^{2-} and Cl^- d) None
44. Which of the following is least reactive?
a) Noble gases b) Halogens c) Alkali metals d) Transition metals

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45. Which group is known as noble gases?
a) Group 18 b) Group 17 c) Group 16 d) Group 15
46. The element with atomic number 10 is –
a) Neon b) Oxygen c) Nitrogen d) Fluorine
47. The element with atomic number 18 is –
a) Argon b) Neon c) Krypton d) Xenon
48. The element with atomic number 36 is –
a) Krypton b) Argon c) Xenon d) Radon
49. The element with atomic number 54 is –
a) Xenon b) Argon c) Krypton d) Radon
50. The element with atomic number 86 is –
a) Radon b) Xenon c) Argon d) Krypton
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Answer Key – Set 4

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-a 17-a 18-a 19-a 20-a
21-a 22-a 23-a 24-a 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-d 42-d 43-a 44-a 45-a 46-a 47-a 48-a 49-a 50-a