Chemistry Worksheets Class 11 on Chapter 3 Classification of Elements and Periodicity in Properties - Set 4

Q-1: Which of the following equations represents the first enthalpy of ionisation?
a) $Li\ (s) \rightarrow Li^{+}(g) + e^{-}$
b) $Li\ (l) \rightarrow Li^{+}(g) + e^{-}$
c) $Li^{+}(g) \rightarrow Li^{2+}(g) + e^{-}$
d) $Li\ (g) \rightarrow Li^{+}(g) + e^{-}$

Q-2: Identify the least stable ion among the following.
a) Li^{-}
b) Be^{-}
c) C^{-}
d) B^{-}

Q-3: Which of the following compounds has the minimum ionic radius of chromium?
a) CrF_3
b) K_2CrO_4
c) $CrCl_3$
d) CrO_2

Q-4: An atom of an element has an electronic configuration 2,8,8,2. Which of the following statements is correct?
a) The valency of the element is 6
b) The element exists as a diatomic anion
c) The element forms a basic oxide
d) The element is a non-metal.

Q-5: Which of the subsequent pairs of atomic numbers corresponds to atoms that are part of the same group?
a) 20, 38
b) 14, 34
c) 52, 37
d) 17, 36

Q-6: Which of the following statements is incorrect for isoelectronic ions?
a) Ions with the same electric charge are said to be isoelectronic.

b) Their nuclei are surrounded by an equal number of electrons.
c) Ions with both positive and negative charges may be present in an isoelectronic series.
d) The positive charge in a series of isoelectronic ions of the same period will increase with increasing atomic number.

Q-7: Describe the high reactivity tendency for the elements that are located on the extreme left and right sides of the periodic table.

Q-8: In terms of electronic configuration, what do the elements of the given period and a group have in common?

Q-9: Consider the elements N, P, O, and S and arrange them in order of decreasing the first ionisation enthalpy.

Q-10: Explain the meaning of the positive electron gain enthalpy.

Q-11: What traits do the elements of the s-block generally have?

Q-12: Why is potassium (atomic mass 39.10) placed after argon (atomic mass 39.94) in the periodic table?

Q-13: What are transuranic elements?

Q-14: Discuss the anomalous behaviour between beryllium and boron.

Q-15: Describe the main features of the long form of the periodic table.

Q-16: Which of the following species will have the largest and the smallest size?
Na, Na^+, Al and Al^{3+}

Q-17: Account for the fact that the 4th period has eighteen and not eight elements.

Q-18: The valency of the representative elements is either equal to or eight minus the number of valence electrons. What underlies this rule?

Q-19: The following table lists the three quantum numbers for the final electron in X and Y. Which periodic table families do these elements belong to?

	l	m	s

A	0	0	-1/2
B	2	-1	+1/2

Q-20: A diatomic anion contains 35 electrons and 42 neutrons. What is the atomic mass of the element, and in which group of the periodic table does it lie?