

# PERIODIC TABLE WORKSHEET - 1

1. Give the name and the symbol of the elements which occupy the following positions in the Periodic Table.
  - (i) Period 4, group II A
  - (ii) Period 2, group III A
  - (iii) Period 3, group zero
  - (iv) Period 2, group VI A
  - (v) Period 3, group IV A
2.
  - (a) Name three alkali metals and state their group number.
  - (b) Name three alkaline earth metals and state their group number.
  - (c) Name three halogens and state their group number.
  - (d) Name three noble gases and state their group.
3. What do you understand by the term "transition elements"?
4. Select transition elements from the following list:  
List: potassium, calcium, manganese, chromium, copper, Calcium, iron, platinum.
5. Phosphorus (at. number 15) and Silicon (at. number 14) are nonmetals. Answer the following questions :
  - (i) Write down the electronic configuration of phosphorus and silicon.
  - (ii) To which group does the phosphorus belong and why?
  - (iii) To which group does silicon belong?
  - (iv) To which period phosphorus and sulphur belong and why?
  - (v) Which element is more non-metallic and why?
  - (vi) Which element has smaller atomic radii?
6. An element has atomic number 19. Where would you expect this element in the Periodic Table and why?
7. An element with atomic number 18 is a noble gas. Into which families you shall place elements with atomic numbers 17 and 19 and why?
8.
  - (i) Which period in the Periodic Table is the shortest?
  - (ii) Name all the elements present in this period.
9.
  - (i) Which period in the Periodic Table is the longest and complete?
  - (ii) How many elements are present in it?
10. Metallic properties of the elements change to non-metallic properties as one move from left to right in a period of the periodic table. Explain.
11. Amongst the elements P(at. no 14), Q (at. no. 6) and R(at. no. 15), which elements have similar chemical properties and why?

12. Study the table and answer the following questions carefully:

<i>Elements</i>	<i>P</i>	<i>Q</i>	<i>R</i>
<i>Mass number</i>	23	20	35
<i>Number of neutrons</i>	12	10	18

- (i) Write the atomic number and electronic configuration of elements P, Q and R.
- (ii) To which groups do P, Q and R belong?
- (iii) To which periods do P, Q and R belong?
- (iv) Which amongst P, Q and R is (i) an alkali metal (2) noble gas (3) halogen?
13. E (2, 6), F (2, 8), G (2, 7) and H (2, 8, 1) are the coded names of elements and their electronic configuration is shown within brackets. Answer the following questions:
- (i) Which element in the above list does not belong to the same period and why?
- (ii) Which element is a noble gas?
- (iii) Which element is absolutely essential for breathing?
- (iv) Which element is a member of the halogen family?
14. Why does the halogen atom have a very strong electron affinity? Explain.
15. Explain why reducing power of elements increases as one goes down a group.