Classification of elements

1. What is the periodic table?
2. Introduce Mendeleev's periodic law and the Modern periodic table.
3. What are isotopes, groups, and periods?
4. What factors do the valencies of elements depend upon?
5. What is the basic difference between Mendeleev's periodic law and the modern periodic law?
6. In which group, period, and block will the element with atomic number 20 be present?
7. What are the major differences between metals and nonmetals?
8. The increasing order of reactivity among group 1 elements is Li < Na < K . Explain.
9. What are the features of the modern periodic table?
10. Why are Li, Na, and K placed in the same group of the periodic table?
11. Write the general outer electronic configuration of S-,p–, d-, and f- block elements.
12. Why is sodium less reactive than potassium?

13. Why are the members of group IA called alkali metals?

14. Why do transition elements have variable valency?

15. Study the given electronic configuration of the elements and answer the following questions:

a. 2,8,1 b. 2,8 c. 2,8,7 d.1

i. Give the names of a metal and a non-metal from above.

ii. Which one of the above elements is inert and why?

iii. Identify those elements which are placed in Group 17 and Group 1.