## **UNIT TEST** PERIODIC TABLE AND ELECTRONIC CONFIGURATION

Max.mark:20 Time:45 minute

- 1. There are sub shells in main shell. Name the sub shell present in all the shells.  $(\frac{1}{2})$
- 2. See the first pair and fill the second accordingly.  $(\frac{1}{2})$

p sub shell: 6 electrons; f sub shell: .........

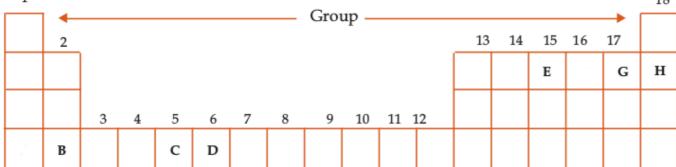
- 3. Find out the correct electronic configuration of copper (29Cu) from the following.  $(\frac{1}{2})$
- a.  $1s^2$   $2s^2$   $2p^6$   $3s^2$   $3p^6$   $3d^{10}$   $4s^1$  b.  $1s^2$   $2s^2$   $2p^6$   $3s^2$   $3p^6$   $3d^9$   $4s^2$
- 4. In the atom of an element present in 5<sup>th</sup> period, last electron is filled 4<sup>th</sup> shell. What might be the block in which that element belongs.
- 5. There are four blocks in modern periodic table. Which of them is not belonged to any group?  $(\frac{1}{2})$
- 6. Arrange the following sub shells in increasing order of energy. 1s,2s,2p,3s,3p,3d,4s,4p (1)
- 7. In an atom, last 3 electrons are filled in 4p sub shell. (2)
- a. Give its complete sub shell electronic configuration.
- b. Find the group and period of the element.
- 8. Atomic number of vanadium is 23 (23V).  $(2\frac{1}{2})$
- a. Write down its electronic configuration. b. Find out its block, period and group.
- 9. Electronic configuration of a few elements are given. Using this fill the table given below.

 $2s^2 2p^6 3s^2 3p^5 Q: 1s^2$  $2s^2 2p^6 3s^2 3p^6 3d^6 4s^2$ R:  $1s^2$   $2s^2$   $2p^6$   $3s^2$   $3p^6$ 

	Element	Block	Period	Group
	P			
	Q			
	R			

- 10. MnO<sub>2</sub> and Mn<sub>2</sub>O<sub>3</sub> are the two compounds of Manganese(25Mn), a d block element.
  - (3)
- a. Find oxidation state of Manganese in each compound.
- b. Give the electronic configuration of the manganese ion in MnO<sub>2</sub>.
- c. Why do the d block elements show variable oxidation state?
- 11. Some statements related to blocks are given. Categorise them as s block, p block, d block and f block elements. (3)
- a. All are metals. b. Most of the elements are artificial and radio active.
- c. Consists metals, non metals and by metals. d. Largest number of of the elements are included in this block.
- e. Alkali metals and alkaline metals are belonged to this block.
- f. Show similarity in chemical properties in groups as well as in periods.
- 12. A part of periodic table is given. Answer the questions given below.

(3)1 18



- a. Find out p block elements given in the table.
- b. Which is the element in which last electron is filled in s sub shell.
- c. Find out the element whose last p sub shell consists 6 electrons.
- d. Select two elements which can form coloured compound.
- e. Find two elements which show similarity in chemical properties.
- f. Which is most electronegative non metal?