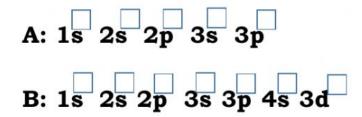
## CHAPTER 5: ELECTRONIC CONFIGURATION

## **Tutorial**

**Question 12.** The table below shows the elements **A** and **B** with their respective proton numbers.

| Element | Proton |
|---------|--------|
|         | Number |
| A       | 15     |
| В       | 23     |

(a) Write the electronic configuration for elements **A** and **B**.



(b) State the number of unpaired electrons for elements A and B.

A:

B:

(c) State the number of valence e for A and B elements

A:

B:

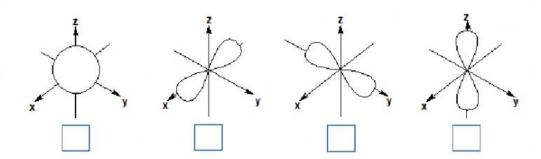
A is a non-metal from group 15, while B is Transition metal

(d) If A becomes ion, state the charge of the ion A

If B becomes ion, state the charge of the ion **B** 

## CHAPTER 5: ELECTRONIC CONFIGURATION

(e) Label the shapes of the valence orbitals in element A



(d) Give sets of the four quantum numbers for each of the valence electrons in element  ${\bf A}$ .

| Valence e | n | 1 | m | s |
|-----------|---|---|---|---|
| 1st       |   | 1 |   |   |
| 2nd       |   | 1 |   |   |
| 3rd       |   | 1 |   |   |
| 4th       |   | 0 |   | - |
| 5th       |   | 0 |   |   |