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# CHEMISTRY

**MULTIPLE CHOICE - 1**

**ATOMIC STRUCTURE**

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## Atomic Structure - 1

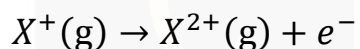
### 1) Helping Concept

An alpha particle is a helium nucleus, i. e.  $\text{He}^{2+}$  and it does not have any electron.

The number of electrons in the species are (A) 1, (B) 0, (C) 2 and (D) 2.

### 2) Helping Concept

Second ionisation energy corresponds to



*The highest value is given by one where the  $X^+$  has a noble gas electronic configuration, i. e.  $\text{Na}^+$ : 2,8.*

### 3) Helping Concept

Group III element has 3 valence electrons,  $ns^2np^1$ . These electrons therefore are the 3 electrons with the highest energy.

### 4) Helping Concept

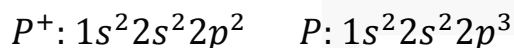
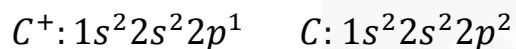
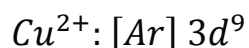
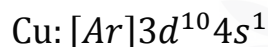
The atomic number (or number of protons) of an element determines *its position* in the Periodic table.

### 5) Helping Concept

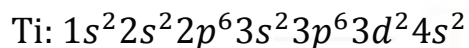
The element is in Group V. It can take in 3 – electrons (forming  $X^{3-}$ ) to form a stable octet configuration.

**6) Helping Concept**

In  $^{18}_8\text{O}^{2-}$ , there are 8 protons and  $18 - 8 = 10$  neutrons. *The number of electrons*  
 $= 8 + 2 = 10$  since there are 2 electrons more than the number of protons  
 (charge is  $-2$ ).

**7) Helping Concept****8) Helping Concept**

1↓	1↓	1↓	1↓	1
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**9) Helping Concept**

Note: 4s is at a higher level and 4s electrons are removed before 3d electrons  
 when Ti ionise.

## 10) Helping Concept

The presence of only 1 proton means that the species is hydrogen (H or D).  
with 1 neutron, it is D. An excess of 1 electron over the proton indicates that it is  $D^-$ .

species	protons	neutrons	electrons
D	1	1	1
$D^-$	1	1	2
$H^-$	1	0	2
He	2	2	2

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I am Sorry !!!!!



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- Founder & CEO of Chemistry Online Tuition Ltd.
- Completed Medicine (M.B.B.S) in 2007
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