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Class : 8th Gr

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Classwork

Metals and Non-metals.

1) Write down the symbol, atomic number, atomic mass, electronic configuration, valency, group and period number in modern periodic table and ores of the following elements; Aluminium, Copper, Iron, Gold, Silver, Silicon and Sulphur.

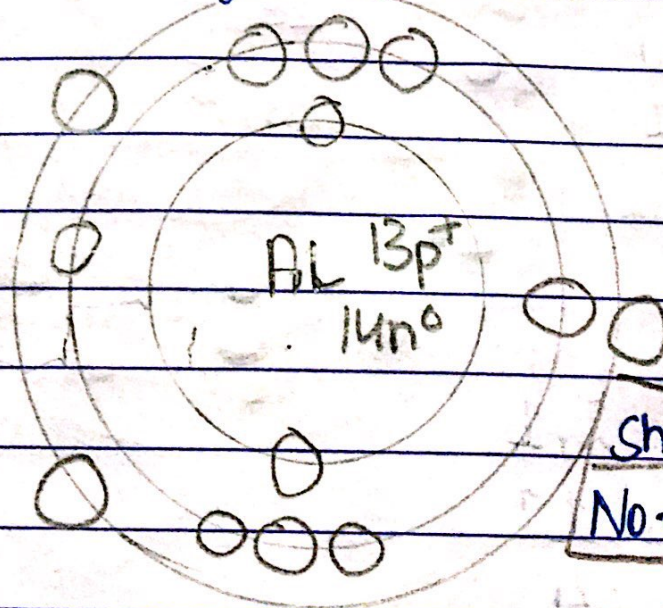
→ ① Aluminium;

Symbol: Al

Atomic number: 13

Atomic mass: 27

Electronic Configuration:



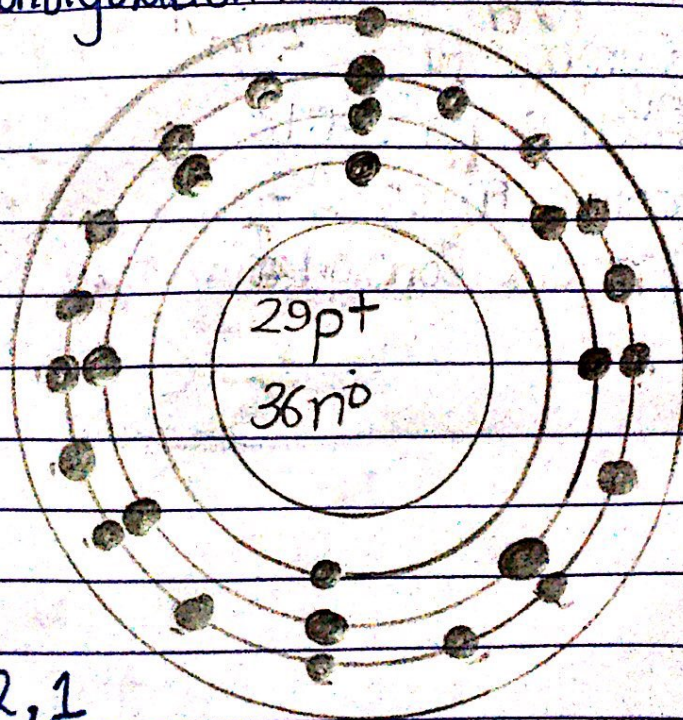
Shells:	K	L	M
No. of e ⁻ :	2	8	3

Valency : 3
Group no : 13
Period no : 3
Ores : Bauxite

② Copper ;

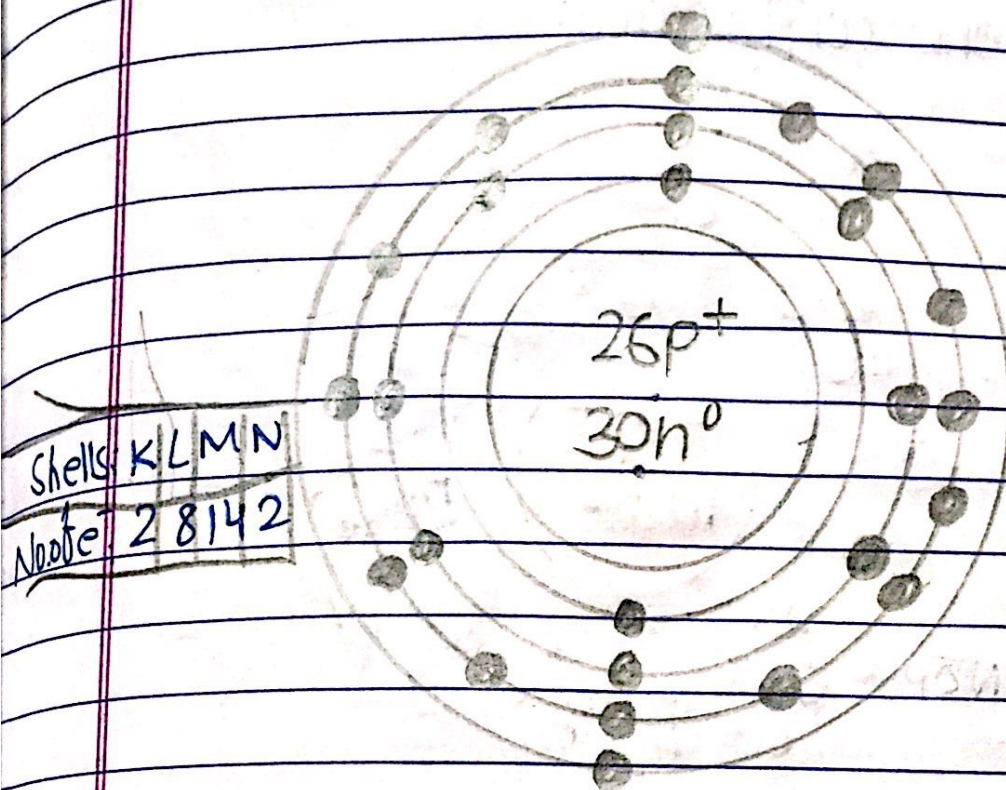
Symbol : Cu
Atomic no : 29
Atomic mass : 64.63
Electronic Configuration :

Shell	K	L	M	N
no of e ⁻	2	8	18	1



Valency : 2, 1
Group no : 11
Period no : 4
Ore : Chalcopryrite

③ Iron
Symbol: Fe
Atomic no.: 26
Atomic mass: 55
Electronic Configuration:



Valency: 2, 3

Group no.: 8

Period no.: 4

Ore: Haematite

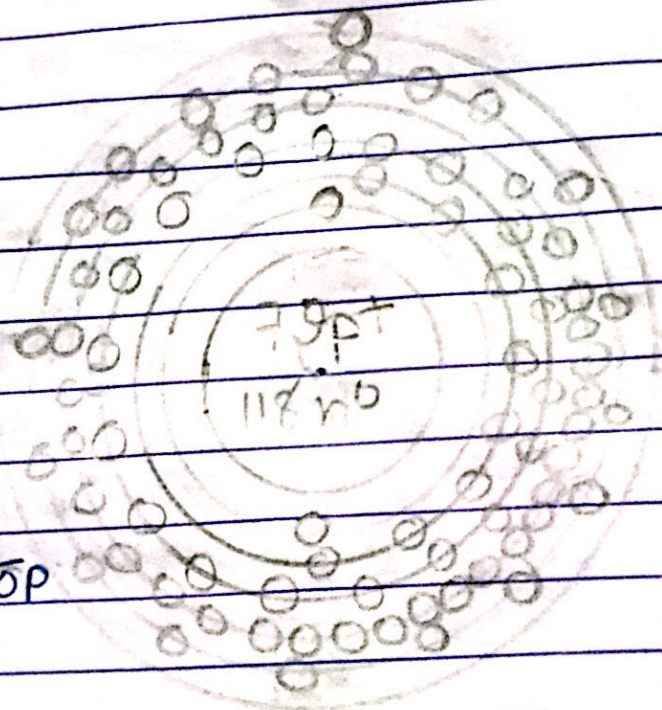
4) Gold

Symbol: Au

Atomic no: 79

Atomic mass: 197u

Electronic configuration:



Shells: ~~KLM~~ ~~KMN~~ NOP

no. of e⁻

~~No. of shells:~~ K | L | M | N | O | P

No. of e⁻ : 2 | 8 | 18 | 32 | 18 | 11

Valency: 7, 5, 3, 2, 1, 0, -1

Group no.: 11

Period no.: 6

Ore: Sylvanite

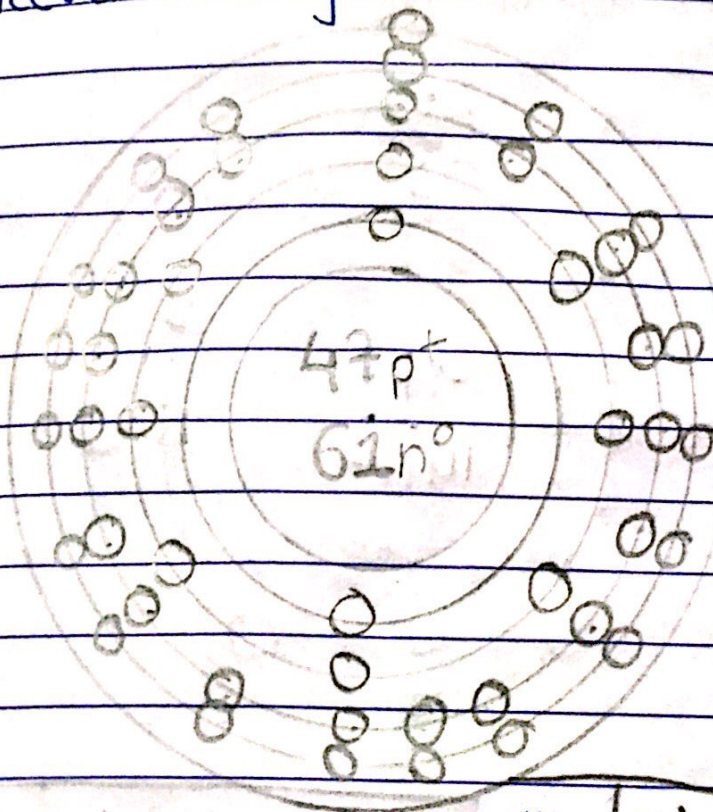
5) Silver

Symbol: Ag

Atomic no.: 47

Atomic mass: 107

Electronic configuration:



Shells:	K	L	M	N	O
No. of e^- :	2	8	18	18	1

Valency: 1

Group no: 11

Period no: 5

Ore: Galena

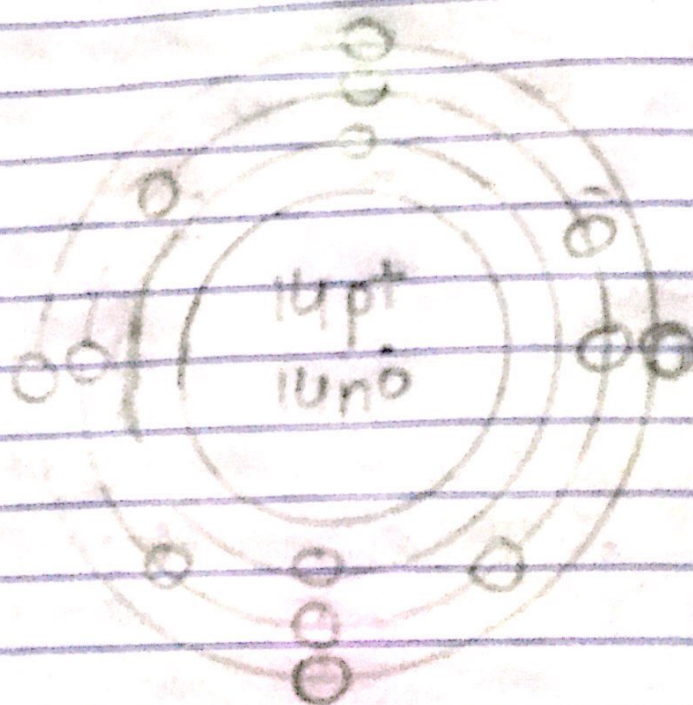
6) Silicon

Symbol: Si

Atomic no.: 14

Atomic mass: 28

Electronic configuration:



Shells:	K	L	M
No. of e ⁻ :	2	8	4

Valency: 4

Group no.: 14

Period no.: 3

Ore: Silica sand

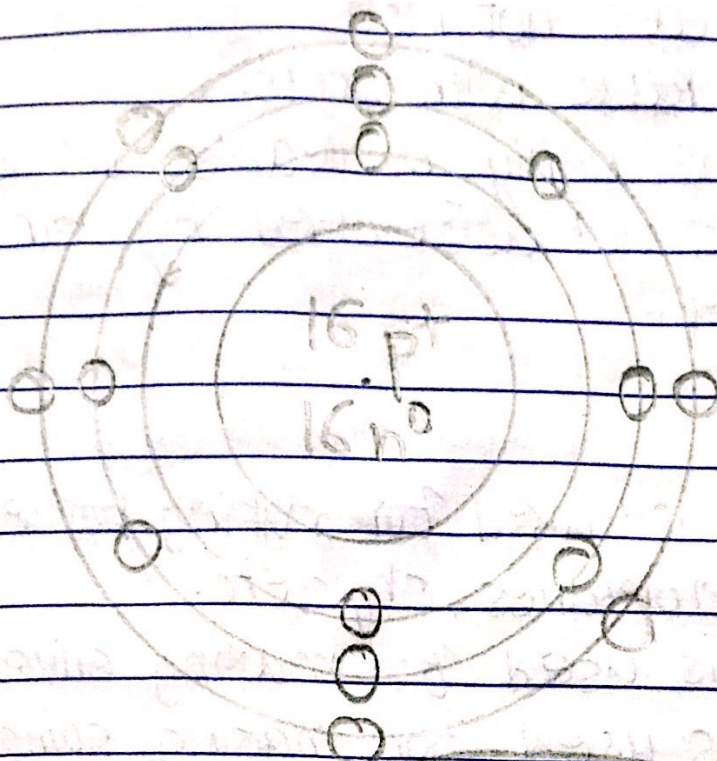
7. Sulphur:

Symbol: S

Atomic no.: 16

Atomic mass: 32

Electronic Configuration:



Shells :	K	L	M
No. of e ⁻ :	2	8	6

Valency: 2

Group no.: 16

Period no.: 3

Ore: [no ore as it is non-metal]

2 Write down any 4 properties and uses of those seven elements.

(i) Aluminium

Properties:

- It does not rust.
- It reacts with acids.
- It is highly malleable and ductile.
- It is not affected by air and water.

Uses:

- It is used for making bodies of aeroplanes, ships, etc.
- It is used for making silver paint.
- It is used for making coins and alloys.
- It is used for making electric wires.

(ii) Copper

Properties:

- It is a reddish-brown metal.
- It is malleable and ductile.
- It is a good conductor of heat and electricity.
- It changes into black oxide on heating.

Uses:

- It is used to make electric wires.
- It is used for electroplating.
- It is used for making coins, medals and statues.
- It is used for making alloys.



Iron

Properties:

- Iron is a greyish-white metal.
- It is malleable and ductile.
- It can be magnetized.
- It is a good conductor of heat and electricity.

Uses:

- It is used in making steel.
- It is used for making vehicles.
- It is used for making rods, pipes, etc.
- It is used for making weapons, tools and parts of vehicles.

(iv) Gold

Properties:

- It is a yellow shiny metal.
- It is highly malleable and ductile.
- It is a good conductor of heat and electricity.
- It is a non-reactive metal. So, it is found in pure state in nature.

Uses:

- It is used to make medicines.
- It is used to make medals.
- It is used to fill cavities of teeth.

- It is used to make jewelry items.

④ Silver.

Properties:

- It is a shiny white metal.
- It is malleable and ductile.
- It is not affected by air and water.
- It is very good conductor of heat and electricity.

Uses:

- It is used to fill cavities in teeth.
- It is used to make medicines.
- It is used for making electronic devices.
- It is used for electroplating

→

(vi) Silicon

Properties:

- It is a grey-colored solid substance.
- It does not occur in a free state in nature.
- It shows properties of both metals and non-metals.
- It does not react with air, water and acids.

Uses:

- It is used to make glass.
- It is used to make ceramic utensils.
- It is used for making polish and colours.
- The compounds of silicon like sandstone are ~~born~~ making houses, statues, etc.

(vii) Sulphur

Properties:

- It is a yellow crystalline solid.
- It is insoluble in water.
- It is tasteless and odourless.
- It does not react with acids easily.

Uses:

- It is used to make sulphuric acid.
- It is used for hair-setting in beauty parlours.
- It is used for making fire crackers, gun powder.
- It is used for making skin ointments for treating skin diseases.