

## Part II Dos and Don'ts for General Science & Ability Paper

Hi there, you've done well. Know that acquiring knowledge is one thing and reproducing it in paper according to what's asked is another.

There are a few things I would like to highlight.

1. A 5 mark part requires 2 sides (not more than that) of a paper. Know that there can be two or three parts of a question and their marks are divided accordingly. So, address all of them in a just manner.

2. Focus on time management. You get 35 minutes to solve one question and about 8 minutes per 5 mark part. Manage your time accordingly.

3. You need to understand that your paper is supposed to look more scientific than theoretical. So, add flowcharts and diagrams where required.

4. Your handwriting and neatness can be really impactful. Avoid cutting and overwriting.

5. Focus on your spellings and your grammar.

Here, in GSA there's no deduction in marks but your expression will definitely create an impact.

6. In ability portion, give explanation for analytical ability question in words. You need to understand that a 5 mark part requires all steps written and explained.

Good luck for CSS 2025. You're gonna rock in sha Allah. :)



# Structure of Ear

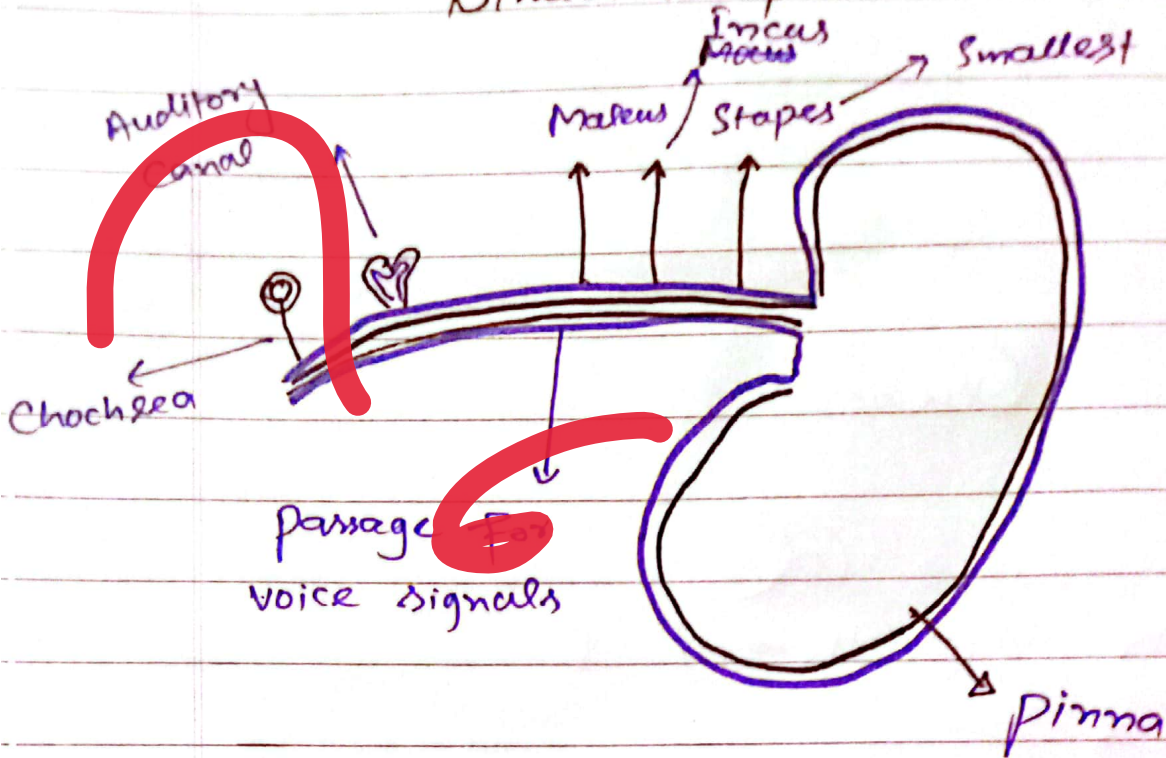
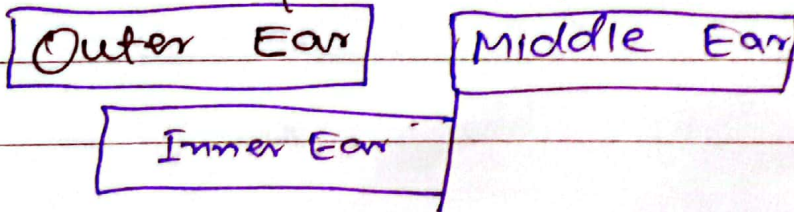


Fig: Structure of Ear

## Three Components of Structure



### Outer Ear

Pinna

an important part of ear. It plays part in voice listening. voice strikes with it.

Passage of signals

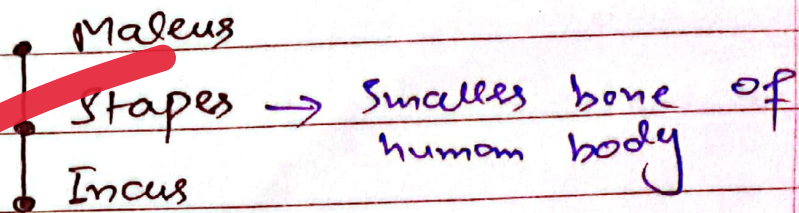
signals of voice from other

person passes through it



## Middle Ear

includes three tiny bones that maintains balance of the body. Furthermore, they also create vibration



## Inner Ear

- i) voice conversion takes place
- ii) voice is sent to brain for Translation
- iii) last part of ear attached with brain

## Auditory Canal

• sends voice signal to brain for translation

## Choclea

• converts electrical signal into voice.



Day \_\_\_\_\_

(b)  
Structure of Sun

Sun  
It is a ball-like celestial body that provides essential temperature to Earth. Without Sun, life can not be sustained on Earth

Structure

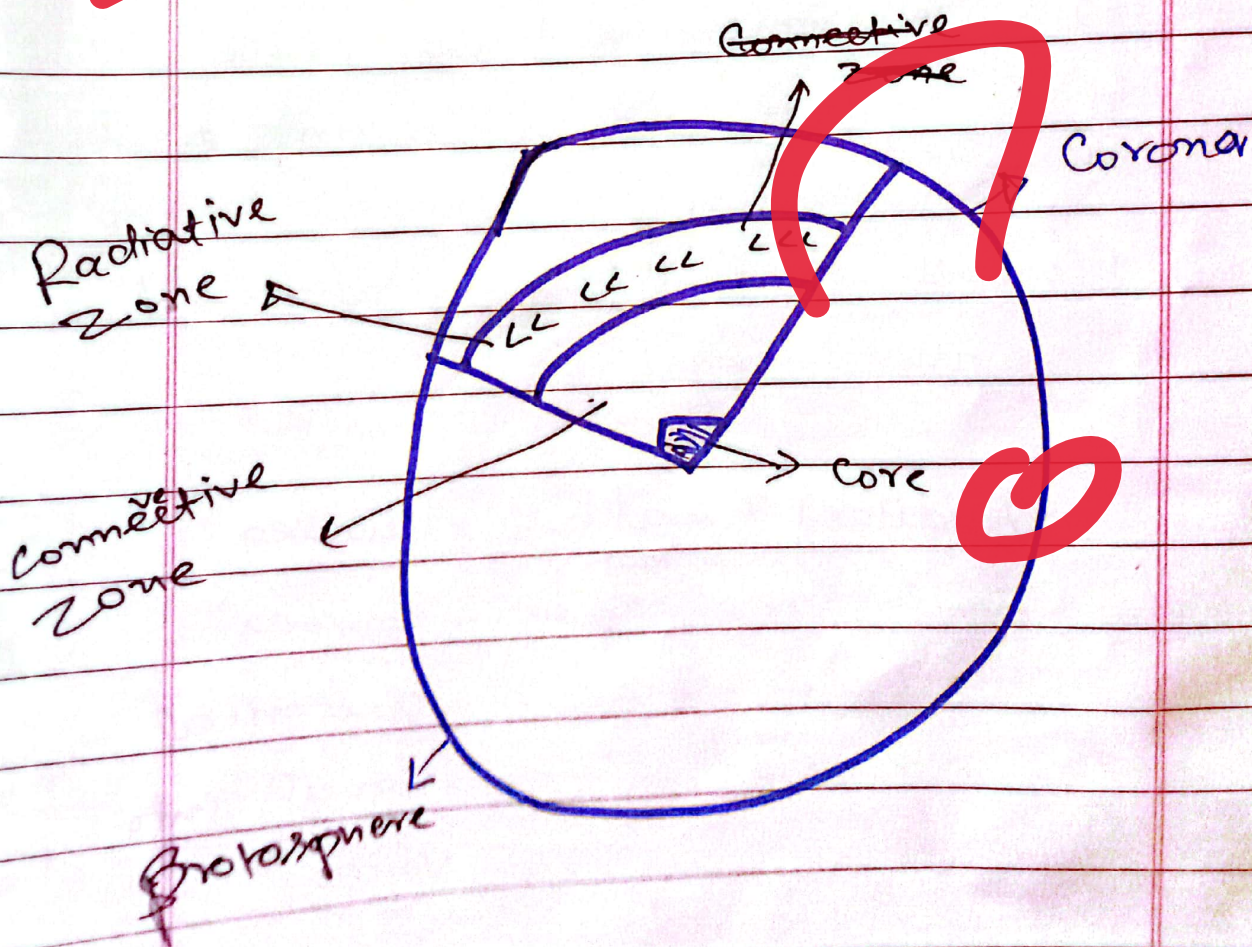


Figure: Structure of Sun



→ Corona

It is outermost boundary of Sun. It provides temperature to earth

→ Convective Zone

- i) includes plasma
- ii) also provides temperature to earth

→ Radiative zone

- i) provides temperature to earth
- ii) includes a process of radiation

→ Core

- i) main part
- ii) provides energy to Sun
- iii) Nuclear fission occurs for providing energy



## Characteristics of Sun

ii) 150 m<sup>i</sup> Temperature

ii) 93 mile distance from  
Sun

iii) A ~~planetary~~ ~~stars~~

2



(a)

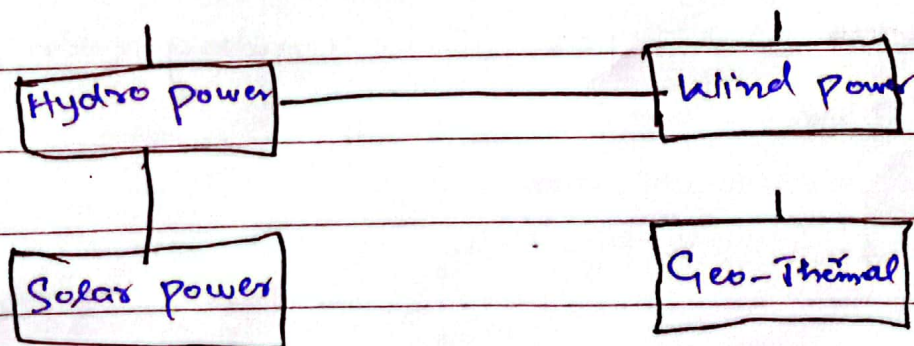
## Renewable energy Sources in Pakistan

### Renewable energy

- i) received from natural sources
- ii) viable option for mitigating climate change
- iii) ~~could fulfill~~ energy demands

### • Sources in Pakistan

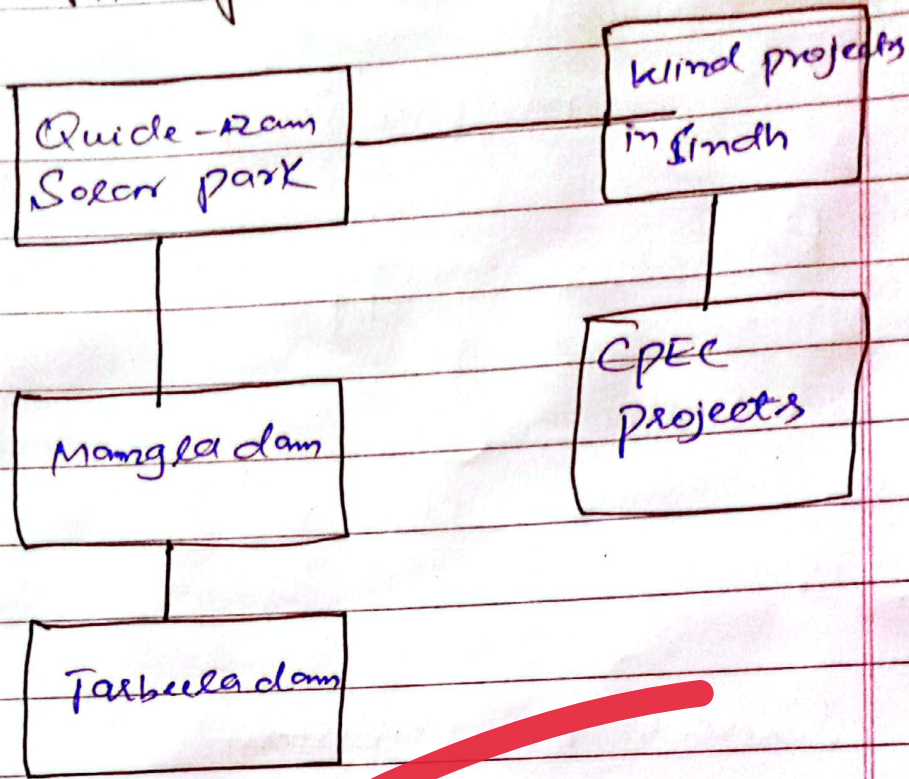
Various sources of renewable energy are in Pakistan



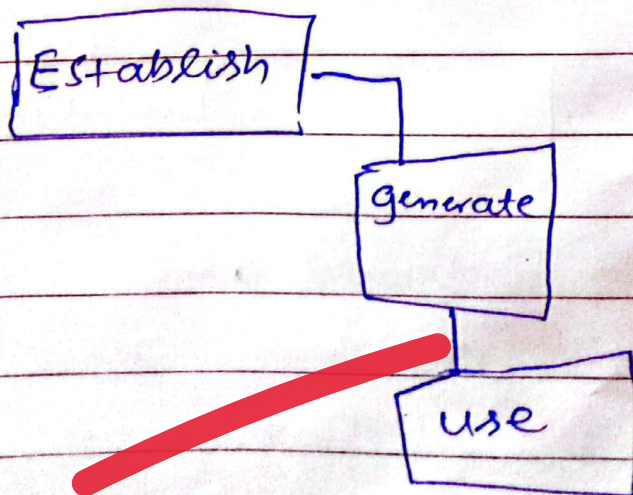
According to World Bank, wind power and solar can ~~be~~ generated excessively in Pakistan due to available high wind pressure and temper<sup>ature</sup>.



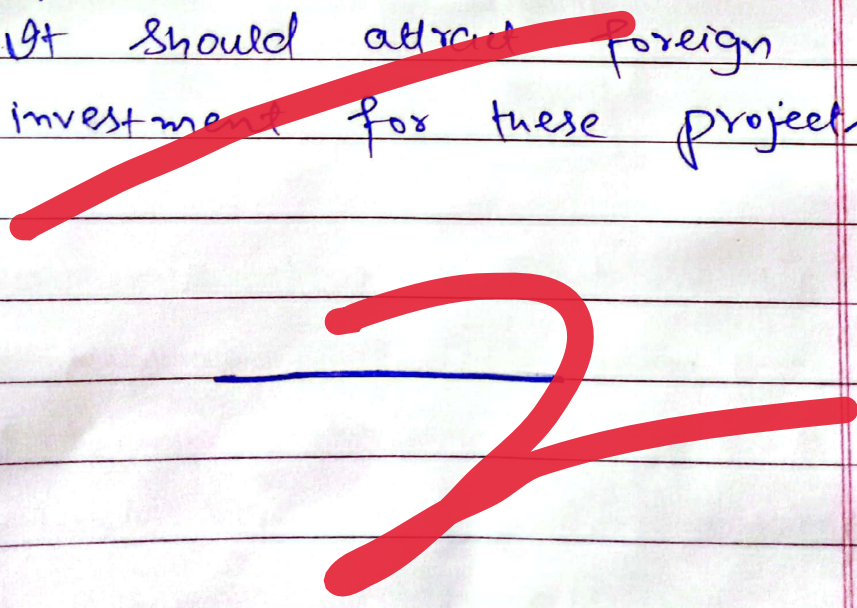
# Projects of Renewable energy in Pakistan



Policy options to utilize these sources for overcoming energy crisis





- i) PAX should complete already continued projects
  - ii) It should increase more renewable projects under CPEC
  - iii) Develop a <sup>separate</sup> governing body for inspecting these projects.
  - iv) Establish dams and run-of-the river projects like India
  - v) Increase solar projects because they can prove effective due to high temperature in Pakistan
  - vi) It should attract foreign investment for these projects.
- 



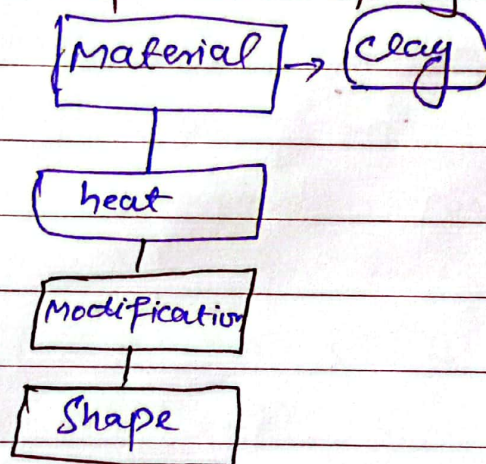
(C)

## Ceramic Material

→ Ceramic

It is non-organic material that is being used increasingly in different places.

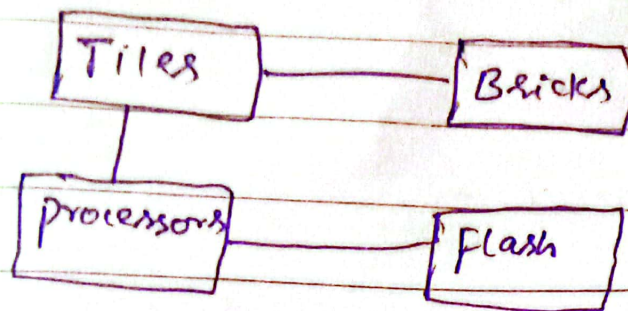
→ Process of developing Ceramic



It is heated with fire or any other modern sources for getting or moulding into its desired shape. & After heating, the substance can easily be moulded.



## Examples of Ceramic



## Usage of Ceramics

- Homes: Washrooms
- Computer: processors
- Tiles and Bricks in Construction

Recycling process of Ceramics:  
possible or not?

The recycle process of Ceramics is not possible like plastics. Because, they are heated and converted into the objects that can not be recycled. Their objects decay with the passage of time because of lacking the process of recycling.



Ceramics



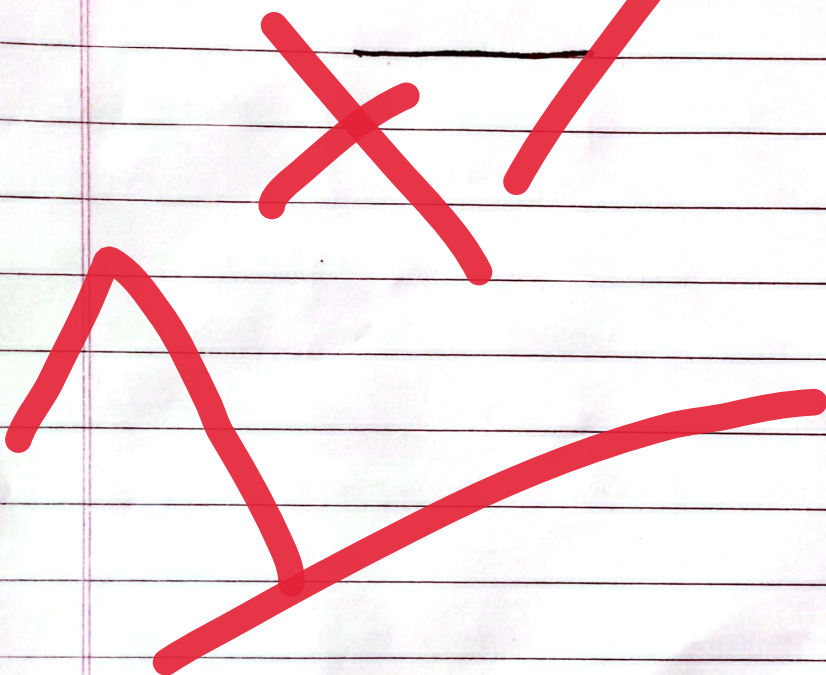
Recycle



Difficult

↳

Plastics can be recycled but they are not recycled. Ceramics are not moulded again in heating that is bigger difficulty for recycling them.





## Question 02

Measure for global warming  
in Cop 29

Global warming

is climatic process  
that has resulted in the increase  
of temperature.

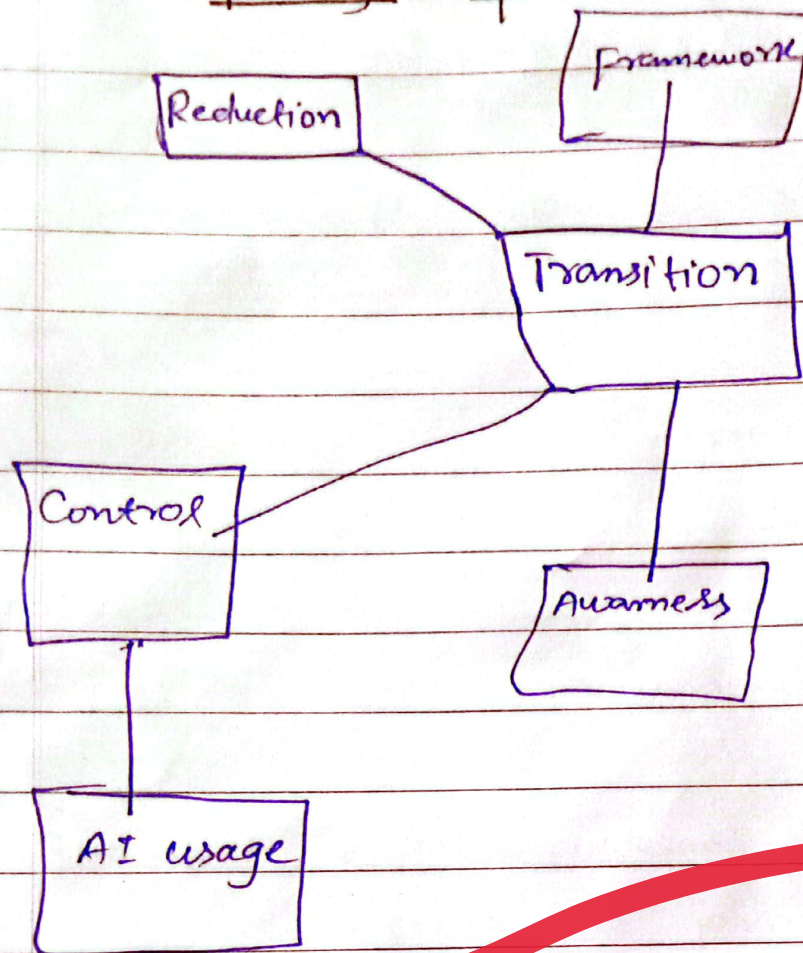
→ Policy measures for global  
warming in Cop 29

Cop 29

It will be held in  
in the last months of 2024.  
These Cops are held every  
year for devising the strategies  
to cope with the problem of  
Climate change.



## Policy options



i) Reduce the substance or pollutants that accelerate the process of global warming. A proper and binding decision should be taken

ii) Renewable energy sources should be made necessary for energy



Day \_\_\_\_\_ Date \_\_\_\_\_

iii) AI technology should be kept in discussion for playing its role in decreasing global warming

iv) A proper framework of awareness to the public should be discussed

Vague!

v) Action taking or accountability mechanism should be devised for the participants who do remain unable to fulfill demands



(d)  
Conductors, Semi-conductors, Metals,  
Plastics, Ceramics

### Conductors

are used for conducting electricity. The current could flow easily from them. Therefore, they are used for conducting electricity.

- Current flow → Yes

### Examples

- Silver
- Iron
- Copper

### Semi-conductors

These fall between insulators and conductors. Some allow current to flow while other do not allow current to flow.

Current flow → Allowed by some



## Metals

These are found from Earth. They are present in the mantle. These are used extensively.

### Examples

- Gold
- Steel
- Iron

## Plastics

These are organic materials and can be recycled as well. But they also have some repercussions for humans as well.

### Examples

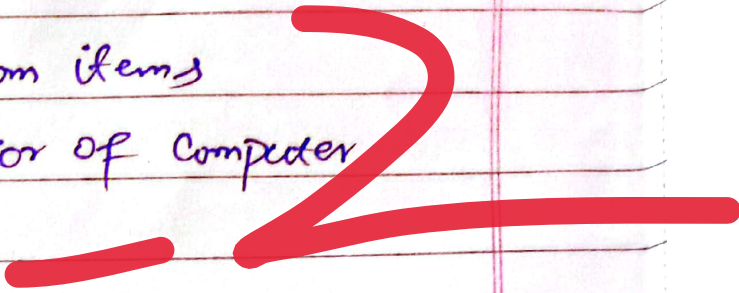
- Plastic Toys
- Home domestic items
- Thermosetting plastics



## Ceramics

are non-organic material that are made up of clay by extensive heating. with heat, they can be moulded easily.

## Examples

- Bricks,
  - Tiles
  - Classroom items
  - processor of computer
- 

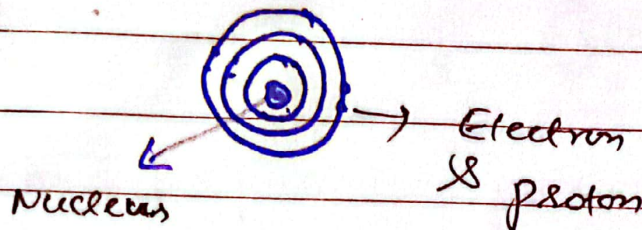


(C)

→ Bond of atoms & Structure of water

### Atom

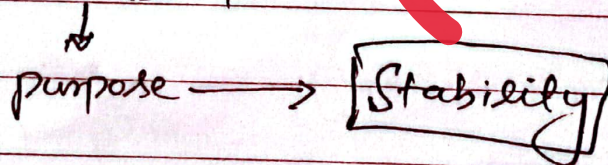
- i) a small particle.
- ii) Single dot of a pencil include 200 million atoms



Why atoms form Bonds?

The atoms form bond only for one purpose and that is to gain stability

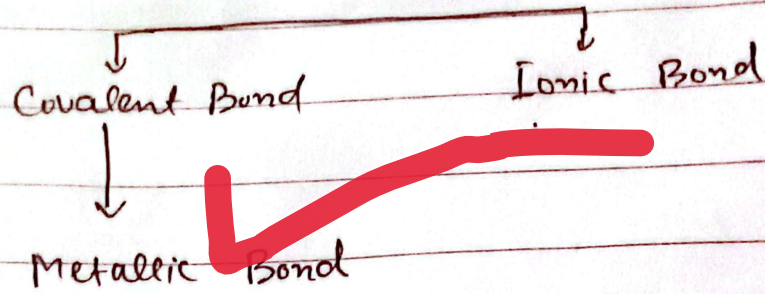
Atomic Bond



When atoms form bond, they become strengthened. The stability is gain under Octet rule.



# Examples of Chemical Bonding



## Structure of water

### Water

is a blessing of Allah.  
 Without water, human survival  
 seems in danger.



→ Drop of water

### Structure

- high density molecule
- density approximately 1.5 mg/l
- has no calories for humans
- has its own weight as well
- Colourless molecule.



(b)

→ Function of Arteries, Veins,  
Capillaries

### Arteries

are part of body. These are pipe for blood. These are also used for carrying blood. The circulation of blood is carried out through arteries. These carries oxygenated blood from heart to body.

- Arteries → oxygenated blood

Pulmonary Artery, it is only artery vessel that carries de-oxygenated blood

### Veins

these also perform the function of carrying blood. But they bring de-oxygenated blood to heart. Blood clotting also occurs in veins.

Veins → de-oxygenated blood



pulmonary veins: It is only a single vein that carries oxygenated blood unlike other veins.

### Capillaries

these are small blood vessels and are presented in every part of our body. They only carry oxygenated blood

Capillaries → "only oxygenated Blood"

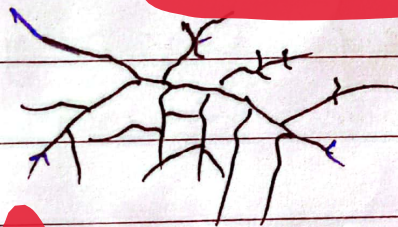
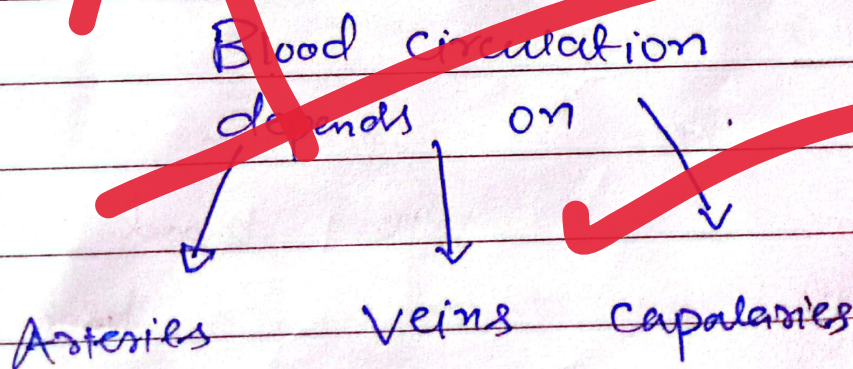


Figure: Capillaries





Section 02Question 08

(9)

Given data: BROTHER

Codified as

Q D G S N Q A

Required : SISTER

Codified ?

Ans:

B R O T H E R

Q D G S N Q A

**Explain in words**

B R O T H E R

A Q N S G D Q

S I S T E R

Q D S R H R

Ans

Q D S R H R



(b)

Given data, 1, 2, 6, 21 —

Required Missing no?

1, 2, 6, 21

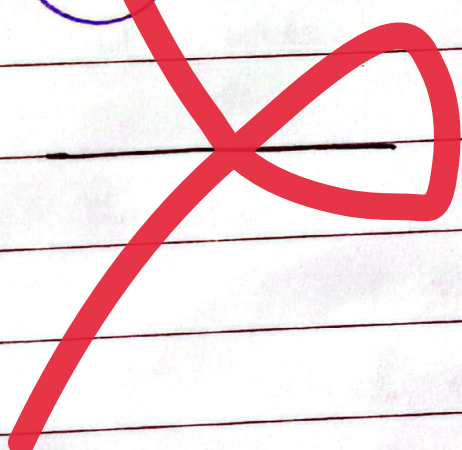
$$1 + 1 = 2$$

$$2 + 2 + 2 = 6$$

$$6 + 3 + 3 + 3 + 3 + 3 = 21$$

$$21 + 4 = 25$$

25





# Question of

Define IQ,

IQ

refers to intelligent Quotient.  
It is also a main part of four  
quotients of humans. Without int this  
Quotient, human lacks very basic  
skills and face difficulties.

Factors affecting IQ

- Family Background
- Education
- Hereditary
- Human genes
- Resources



(C)

Given data = 20, 22, 21, 21, 23

Required: Median?

Mode?

Range?

Mean?

Mean

$$= \frac{20 + 22 + 21 + 21 + 23}{5}$$

$$= \frac{21.07}{5}$$

~~$$= \boxed{21.4}$$~~

$$\begin{array}{r} 21.14 \\ 5 \overline{) 107} \\ \underline{60} \\ 70 \\ \underline{50} \\ 20 \end{array}$$

Median

20, 22, 21, 21, 23

~~middle value =~~ 21

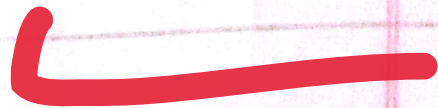


Range 20, 22, 21, 21, 23

Largest - Smallest

$$23 - 20$$

$$= 3$$



Mode

20, 22, 21, 21, 21

21

