

# GSA Part II

## Section I

### Question No. 1

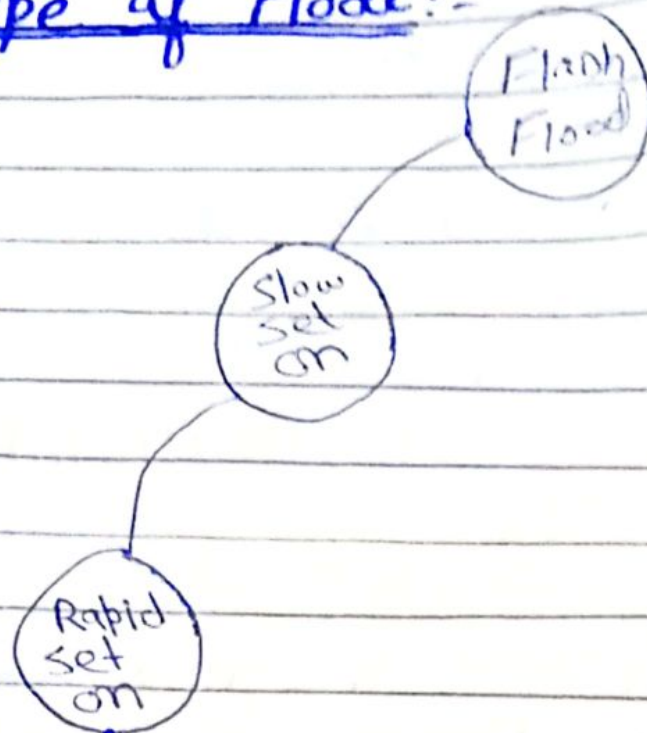
(part 1)

What are the main causes of floods? How Flood of 2022 were different from super floods of 2010?

### Flood

Flood is a naturally causing events that are recede sometime quickly and sometimes it take a day or even month to build or discharge. it is flows from higher areas to lower sides. The density of floods cause disasters effects in environments, people, animal, money, etc.

## Type of Flood :-



## Which factors encourages the Floods :-

Barriers set channel



The Flow of water put impact on barriers and break them. and force the water to move outward from the river



Vegetation



The cut down of tree decrease the vegetation that increase risk of Flood



Urban-set-barrier



mismanagement during

Construction Cause

the Flood, water

do not get way

to pass. so it can

move toward

residential area

sediments



Sediments

are also

responsible

to occurrence

of Flood

in residential area

### 3- Causes of Flood :-

The Flood is a naturally occurring due to heavy rain which break the barriers of rivers, and cause of Flood occurrence -

⇒ Heavy rain even a short period of time cause flood occur.

⇒ wind flow and hurricane force the water to move outside the river to break the barrier of gate.

⇒ Sediments may also responsible for flood occurrence

⇒ Vegetation process responsible for Flooding

⇒ Mismanagement of the town plan. made the huddles on the way of water.

⇒ Climate change increase of temperature cause the melting of glaciers or ice, which increase the level of water.

⇒ Garbage in river increase level of water.

≡ How Flood of 2022 is were different from Super flood 2010?

The flood of 2022 is completely different

Year 2010-2022

Flood of 2010	Flood of 2022
1- Loss of Lives - over 1985	Loss of life was 1785
2- it cause the 43 trillion loss overall	in which loss is about 23 trillion
3- it is due to monsoon spell of heavy rain which continue about 21 July to August	3- it is a flash flood naturally occurring
<b>impacts</b>	<b>impacts</b>
(i) Relief of Texasosit (TTP)	1- Economy
2) Political instability	2- infrastructure
3) Largest loss of economy	3- Environment
	4- Loss of life

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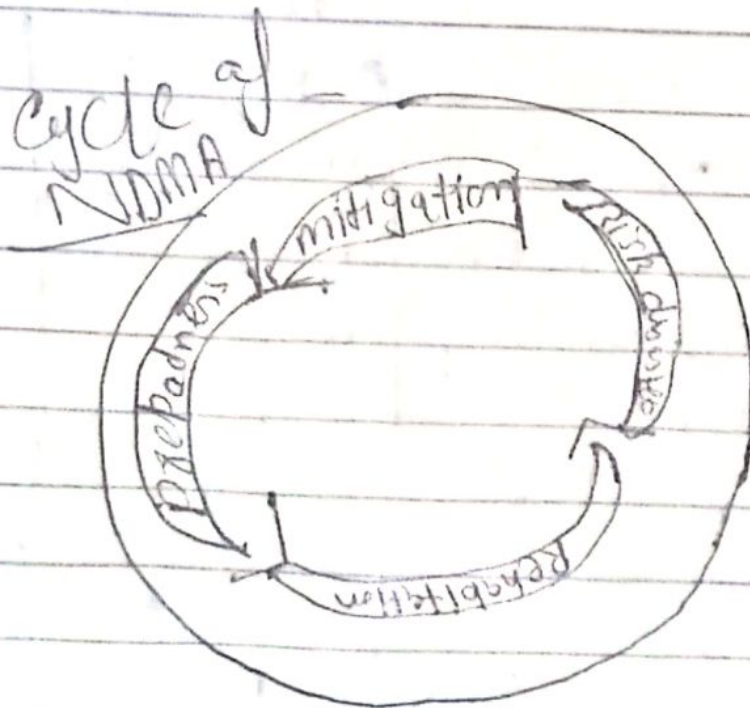
- (i) Relief of Texasosit (TTP)
- 2) Political instability
- 3) Largest loss of economy

- 1- Economy
- 2- infrastructure
- 3- Environment
- 4- Loss of life

- (4) Environmental degradation
- (5) GDP's Low
- (6) inflation level rise

The flood of 2010 was the biggest Flood of history.

## Prevention/Role of NDMA



The NDMA act as a relief provider and humilitation in 2010 Flood. Give the pozeish yanding to human that ~~had~~ suffered from flood.

(Part c)

Why do atoms form  
Chemical bonds? Explain  
the structure of water?

## 1 Chemical Bonding

Everything in the world  
wants to get stability. The  
atom wants to get stability  
these atoms form  
covalent or Ionic bond  
during chemical reaction.

The are formed by  
sharing or transfer or  
losses of electrons.

## 2 Definition

Atom wants to stability  
by losing, sharing, or transfer  
of its valence electron. called  
Chemical bonding

## 2. Characteristics of Chemical Bonding

- (1) To get stability.
- (2) Some electron have 8 or 7 electron they (release) gain or share electron to form a covalent bond
- (3) Some have 2 or 3 electron in valence shell they release them to other atom and form a stable bond

### Example

#### (1) NaCl

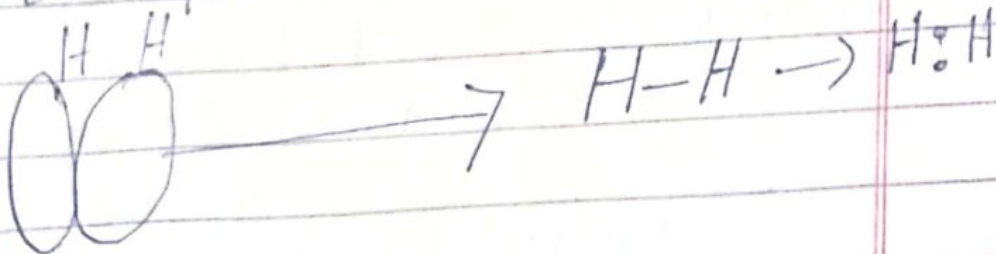






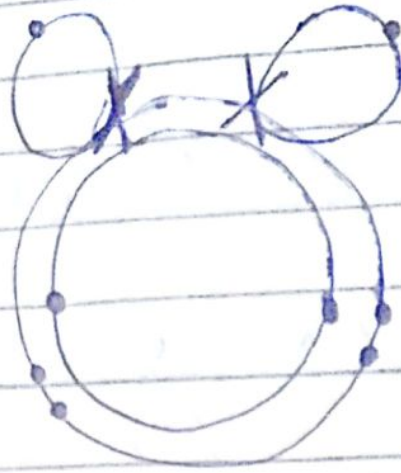
## Structure of water

Water is not share a atom with single bond. they get stability to form a valance electron share completely with two hydrogen atom or one oxygen whole shell is share to form the bond



## Bonding of atom

Atom form a covalent bond with two hydrogen and one oxygen atom -



↓  
water molecule

Part(d)

What are conductor, semi-conductor, metals, plastics and ceramics:

1 -  
 Conductor



Conductors are metal which allows the electric current

Semi-conductor



it is not allows the electric current pass

Pass through  
it



it is carries  
of electric  
charge and  
have ions  
that move  
freely from  
one atom to  
another



Example  
of conductors  
are copper  
silver  
gold & mercury  
etc

or Partly Pass  
through it



it partly  
allow the  
electric  
current  
to pass  
through it  
and not have  
freely move  
ions

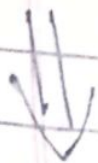


Example  
of semi-  
conductors  
are  
gallium  
arsenide  
Silicon

metal



metal are inorganic material which is consists of metal Non-metal or metalloids



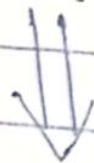
It have the characteristics of ductibility allow electric current to pass through it

metal are the example of

Plastic



Plastics are organic compound that are formed by the molecule chain called polymers



it is easily moulded and formed in different colors

Example of metal are

ceramic



it is an inorganic material which is used in different things formation

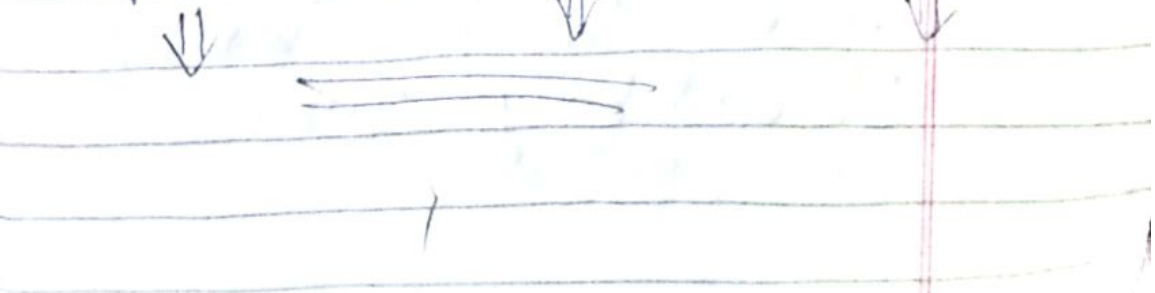


it is used to form a stone ware products

Example of ceramic

silver & copper	wheel of car	Earth Dam or stone work
⇓	⇓	⇓
all the atom that form a positive + Bond except hydrogen are metals	Plastics are two type Thermosetting Polythene	These are two types Non- Crystalline or Crystalline

⇓	⇓	⇓
it is used in formation of jewellery crockery or electric impalances	It is used to form surgical instruments Car wheel Bed or Bed wear	it is used to form stone work or formation of Crockery



# Difference b/w star and planets? How star form black hole?

Stars	Planets
(1) Stars are hot burning ball of gases.	Planet are yellow dwarf object. They have different level of temperature.
(2) They are freely move able in the universe.	They are not freely move in the universe.
(3) They move around the celestial body like Sagittarius or Nebula.	They move around the Sun.

(4)

They emit light energy during Nuclear fusion

They do not emit light during Nuclear fusion.

(5) They have its own light

Planets do not have its own lights

(6)

There are millions of stars in the universe

There are 8 planets in the universe

Examples of Stars are

Polaris

House shape

Sagittarius

Nebula

Example

Mercury

Jupiter

Venus

Nebula

They are  
revolve around  
galaxy

They are  
revolve around  
Sun

(9)  
Stars have  
its life -  
cycle

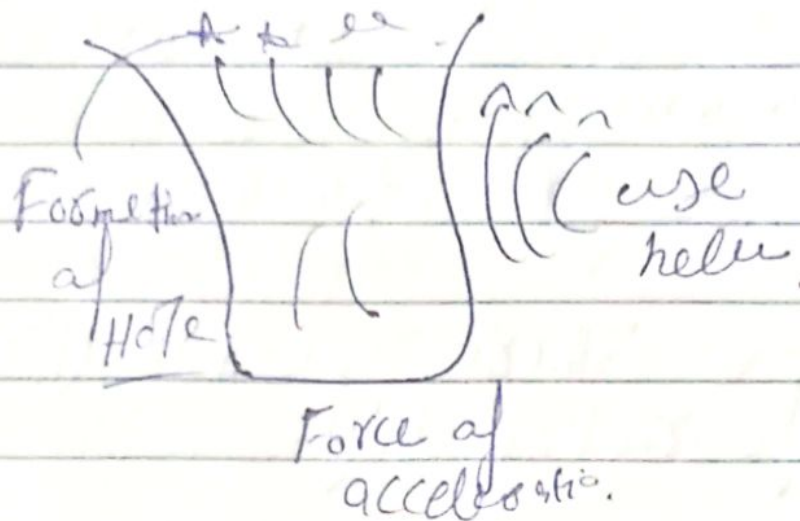
Plantes do  
not have  
life cycle

## How stars form black hole?

The stars have  
high magnitude of energy  
They use their light  
it is occur in two phase  
first stars use hydrogen  
atom when this layer  
is finished. They start  
to use helium to  
form energy. when  
all hydrogen and  
helium used its  
form a Red giant  
Phase



Stars burst and it falls  
own its own center and  
formation of black hole  
occurs.



## Question Nos

Q1

What is Radio activity.  
Difference between Natural  
and artificial radioactivity?

Radio-activity

Radio-activity is a natural process in which ions get stability. They are present in environments, matter or rocks. It is spontaneous reaction. That's occur naturally it is used in Nuclear Fusion.

## Type of Radioactive

There are two types of radio-activity.

- (1) Natural radioactivity
- (2) artificial radioactivity

### (1) Natural-radio-activity

It is natural process which is occur during Nuclear fusion. Because ions have unstable number of protons, Neutron or electrons. They get stability through radio-activity.

These are numbers of process that are happen in universe. it is happen due organism, matter, rocks and environment. They ions lose or gain electron atom to get stable condition.

### Example

Uranium 35, Uranium-34, Potassium 40, are the example of radi-activity

### (2) Artificial-radio-activity.

Artificial radio-activity are man-made. it is non-spontaneous reaction. it is formed when high energy atom bombards on it. They have high energy reaction. it is used in medicine and food industries

# Difference b/w Natural and artificial radio-activity

## 1- Occurance

⇒ Natural radio-activity are occur own its own. it is a natural process.

⇒ while artificial are manmade process which is occur when high energy atomy bomburdes on atom. The the Nucleus fusion reaction form it.

## 2- Origin

⇒ They are present in environment, rocks matter.

⇒ while artificial are in laboratory.

⇒ isotopes