

## Question : 5

### Part (a)

#### Radioactivity~

Radioactive is the process in which an unstable atomic nucleus loses energy by emitting radiation in the form of particles or electromagnetic waves.



There are two types of Radioactivity

- 1) Natural Radioactivity
- 2) Artificial Radioactivity.

#### Natural Radioactivity~

Natural radioactivity is the radioactivity found in nature. when an unstable



nucleus of an atom transforms itself through a radioactive decay, is known as natural radioactivity.

Examples:-

Uranium, thorium ores, and natural nuclear fuels.

## Artificial Radioactivity:-

Artificial radioactivity is the radioactivity is induced by human activities. Simple called it is man-made radioactivity. or Artificial radioactivity.

Examples:-

Color televisions, smoke detectors, mining and agriculture products etc.

## Difference ~

Natural radioactivity originates from

naturally occurring substances, while artificial radioactivity is induced by human activities.

## Part (b)

### Polio:~

Polio is disease : Caused by a virus that mainly affects nerves in the spinal cord or brain stem, which when affected causes paralysis.

### Symptoms:~

- i) fever
- ii) fatigue
- iii) headache
- iv) vomiting



4  
v) Breathing or Swallowing problems

## Causes of Spreading:-

According to WHO:-

many causes of spreading the polio virus but some are these.

- i) Person - to - Person Contact
- ii) Fecal - oral Transmission
- iii) Poor Sanitation and Hygiene.

## Prevention:-

Preventing polio involves vaccination and maintaining good Hygiene practices.

## Vaccine:-

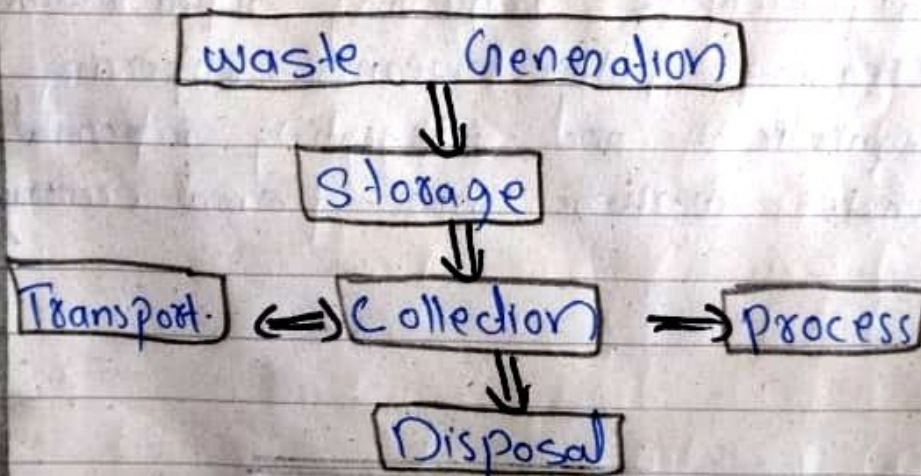
- i) oral polio vaccine (OPV)
- ii) Inactivated polio vaccine (IPV)



## Part (c)

### Step of Solid waste Managements-

waste management includes  
Collection, transportation, processing  
and final disposal.



main Issues of  
Solid waste management  
in our Country~



The solid waste management in our country is poor because of lack of public awareness, insufficient funding, urbanization pressure, and main cause of environmental effects. Our environment is poor due to improper waste disposal. Lead to environmental issues such as pollution, health hazards, and degradation of natural resources. Addressing these issues require a comprehensive approach that includes improving infrastructure, increasing public awareness, enforcing regulations and integrating informal waste workers into formal economy.

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## Part (d)

### Population Planning:-

Population planning is a limit the growth in numbers of a population. Human population planning is the practice of managing the growth rate of human population.

#### Benefits:-

- i) Improving maternal and child health
- ii) Increased talent pool and human capital
- iii) Reduce uncertainty and indicate
- iv) Increase supply of labour.
- v) Increase productive.



## Question no 4.

### Part (a)

#### main Causes of floods

There are many causes of floods.

- i) Excessive Rain
- ii) Dam Breakege
- iii) Cloud Burst
- iv) Glacial melting
- v) Head waves.
- vi) Raising sea level.
- vii) deforestation
- viii) poor drainage system.
- ix) Construction of river bank.

#### dibber 2022 to 2018:-

The 2018 flood is higher than 2022. 2018 is a super flood affected one-birth



of the total area but in 2022, one third of Pakistan is abbeded.

## Part (b)

### Star and Planet.

Star are a huge celestial bodies made up of Hydrogen and Helium and planet are celestial bodies that orbit around the Sun. Star are bigger than planets.

### Star become a black holes

Black hole is not an earth it is a star. An object of extreme density and very strong



gravitational pull even light  
can not escape from its  
density = mass / volume.

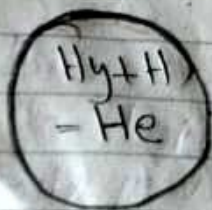
## Formation of Black holes-

Collapse of stars when  
Imbalance star collapse the H-  
He is not most stable  
Convert into Carbon, O, Mg  
Iron to gain stability.  
fusion are run and slow  
down the internal pressure.

- 1) Internal pressure
- 2) gravity of star.

$$\text{pressure} = \frac{F}{A}$$

gravity  $\propto$  Internal pressure  
are opposite to each other  
and from the Black hole.



Fusion Run



energy  
generation.



## Part (c)

### Chemical bonds:-

It is a force of attraction which holds the particles together to form a material that is called chemical bond.

There are 5 types of chemical bonding.

- 1) Ionic bond
- 2) Covalent bond
- 3) metallic bond
- 4) coordinate covalent bond
- 5) Hydrogen bond.

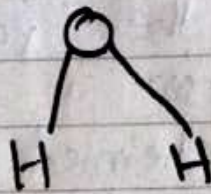
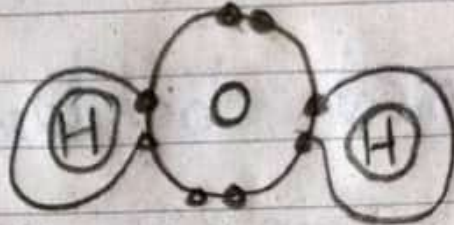
### Formation of water

#### Molecule:-

The water molecule is covalent bond because one oxygen atom shares its two



electrons with two Hydrogen atoms.



water molecule

## Part (d)

**Conductors:**— Conductors are the material which can conduct electricity.

Examples:— Silvers, Steel, Iron, Copper.

**Semi Conductors:**— these are the materials having electrical properties in b/w the conductor and insulators.



Examples:- Silicon, Germanium.

## Metals:-

The metal is a chemical element.

Examples:-

Gold, Silver, Copper, Iron

**Plastics:-** Plastic is a material that is low cost and manufacturability. There are many different kinds of plastics.

Examples:-

Polyethylene, PVC, PET.

## Ceramics:-

Ceramic is any of the various hard, brittle, heat-resistant and corrosion-resistant materials.

Examples:-

Clay, bricks, tiles, glass, and cement.



## Section II

### Question No 7

#### Part (a)

Data :-

Number is divided by = 6

Added = 50

Total = 60

$n = ?$

Sol :- Let:

$$\frac{n}{6} + 50 = 60$$

$$\frac{n}{6} = 60 - 50$$

$$\frac{n}{6} = 10$$

$$n = 10 \times 6 = 60$$

So the number is 60



## Part (b)

odd out

8, 16, 24, 34, 40, 48

Sol:-

This series follow the multiple of 8.

$8 \times 4$  is 32

Let : this series odd one is 34. because 34 is not the divisible by 8.

34 Answer.

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## Question No 8

### Part (c)

→ A is the brother of B and B is the sister of C, C is the father of D, How D is related to A, D being a male member.

Nephew Answer

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