GSA - Final ___/___/___

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LMS ID = 33186

# PART - II

## SECTION - I

### Q - 3 (a)

"COP-28 and COP-27: efforts for Climate fund"

Introduction:

Global warming is impacting different parts of the world, differently. Global South is more vulnerable to the disasters of climate change owing to global warming. A group of 77 countries from Global South demanded funding for the losses and damages they faced as a result of increased natural disasters. So, the idea of loss and damages fund was initiated at the platform of COP-27 in Egypt.

This loss and damages fund was approved via a consensus at the platform of COP-28 held in UAE.

- Disproportionate impacts of global warming and loss and damages fund:

At COP-27, an alliance of 77 most ~~co~~ vulnerable countries demanded loss and damage fund to create better capacity building in the face of disasters caused by global warming.

- COP-28 and ~~realizat~~ materialization of Loss and Damages Fund:

Loss and damages fund was materialized on the first day of COP-28, when Sultan-Al-Jaber announced the approval of fund in UAE.

- Pledges by different countries:

Different countries pledged to add to the fenas.

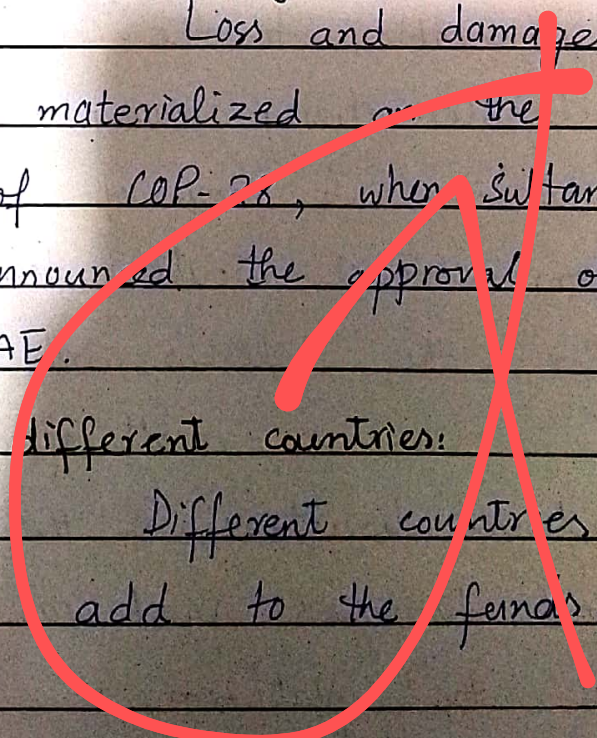

Figure : Eye

including UAE = $100 Million
France = $100 Million
USA = $27 Million
Germany = $100 Million
UK = $50 Million

These pledged fall way short of actual need of Global South. According to a survey vulnerable countries require $500 Billion annually to cope with the effects of climate change. However, the formation of fund is a step in the right direction.

Conclusion:

The platform of COP-27 and COP-28 have seen some serious discussion on the impact of climate change on developing countries. Developing countries are more vulnerable to the impacts due to low resilience against menace of climate change as well as due to geographical positioning. Loss and

damages fund was approved by consensus on the platform of COP-28. This is a positive step in the right direction as the funding will help developing countries in capacity building and mitigating the impacts of climate disasters.

## Q-3(b)

## "Input and Output Devices of Computer"

Computer has both input and output devices through which the information is fed and received respectively.

**Input devices:**

Input devices are the devices of computer that are used to provide or feed information to the computer. These devices are used to give command to the computer which is processed by computer to generate results.

Examples:

Input devices include Keyboard, Mouse, microphone, USB etc.

Output devices:

Output devices are those devices by which computer shows us the result of our input. Computer processes our input and then generates an output which is displayed to us.

Examples:

Output devices include monitor and speaker etc.

Q-3 (c)

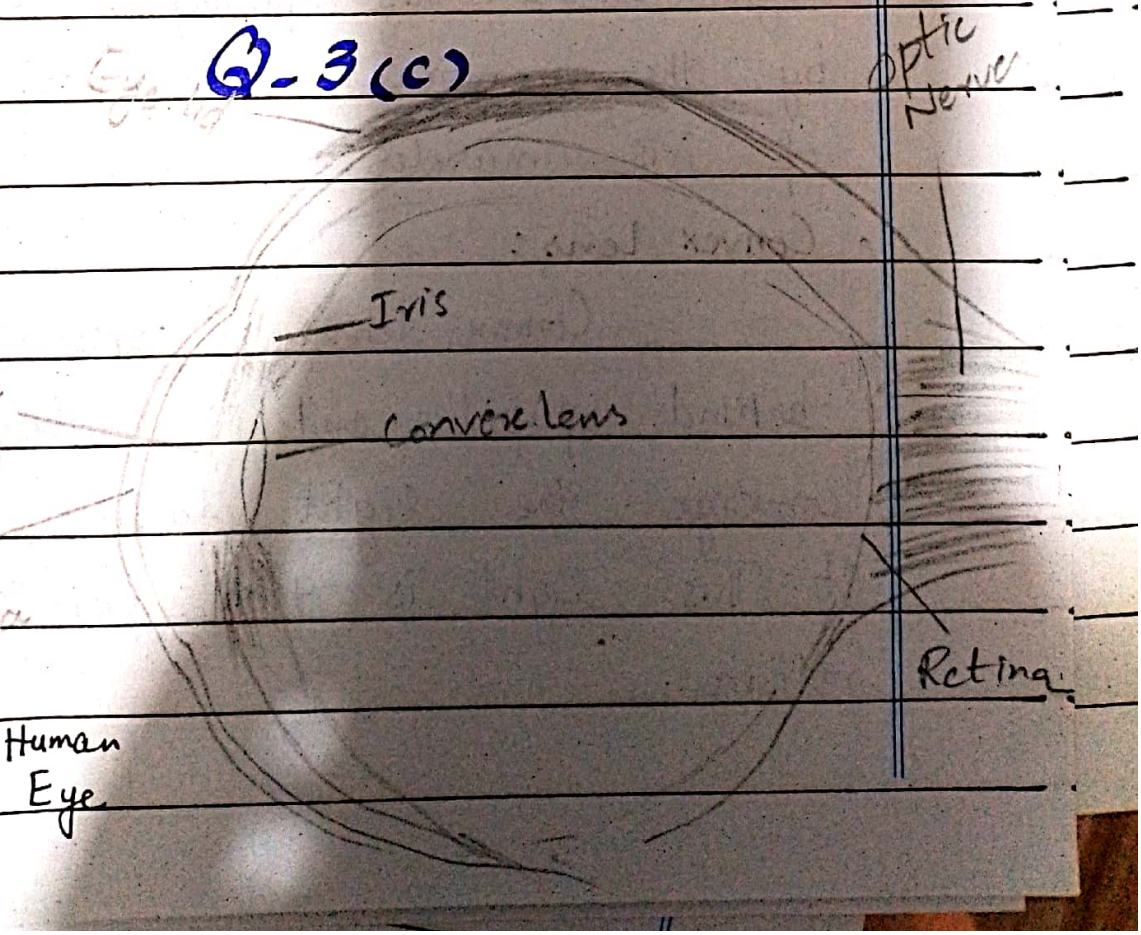


Figure: Eye Human

# Functions of Different parts of Eye:

- **Cornea:**

Cornea is the outermost transparent layer of the eye after eyelid. It is dome-shaped and is responsible for 60% of vision. Cornea is dome-shaped that is why contact lens are made concave on the inside to (make them) sit on cornea properly.

- **Pupil:**

It is the part of eye where light enters. This opening is controlled by the contraction and relaxation of iris muscles.

- **Convex lens:**

Convex lens is present behind pupil and it helps converge the light falling on it. This light is then projected on retina.

• Retina:

Retina is the part of eye, on the back side where the image is formed It has both the con cells and the rod cells.

• Optic Nerve:

Optic nerve carries the signals to the brain where the image is understood.

## Q-3(d)

## "Causes of Water pollution"

Water pollution:

Water pollution is a situation where the water bodies are unfit for living organisms due to deteriorated quality of water. When toxic substances or inferior substances are added to the water, it becomes unfit for drinking and sustaining life.

## Causes:

Water is polluted due to many reasons and ironically all these reasons are associated with antropogenic activities.

- Mixing of Chemical waste from industries:

Most of the industries drain their chemical waste into the water bodies without proper treatment. It causes water pollution.

- Runoff from fertilized soil:

Many freshwater bodies are extremely polluted due to toxic runoff from fertilized soil. These runoffs contain nitrates, sulphates and many other toxic chemicals which cause algal blooms and eutrophication in water bodies.

- Adding untreated domestic waste water:

Another cause of water pollution is addition of untreated domestic

used marked

water into streams and canals. This water contains toxins from soap and sewarage and causes water toxic for aquatic life.

# Q-5

## (a)

## Structure of Kidney

- Kidneys are one of the 5 vital organs of human body. Kidney perform the function of excretion.
- Structure of Kidney:

Humans have a pair of Kidneys one on each side of the body.

- Kidneys are situated right below the diaphragm on the back side of belly. They are protected by the last 2 ribs.
- Kidneys are bean-shaped organs.
- Kidneys are connected with ureter leading to urinary bladder and

urinary bladder is connected to urethra.

- **Structural unit of Kidney:**

Neprons are the structural and functional units of kidney. Each kidney contains almost 1 million nephrons. Each nephron is almost of 3cm.

- **Renal Cortex and Renal Medulla**

Kidney is convex shaped on the outer side while concave-shaped on the inner side. Each kidney is almost 5 cm long, 4 cm wide and 3 cm thick. The outer ~~concave~~ convex side is called renal cortex and inner concave side is called renal medulla.

- **Renal Cortex and Nephrons:**

There are clusters of nephrons in the renal cortex which perform the function of absorption, secretion and filtration of wastes from the blood.

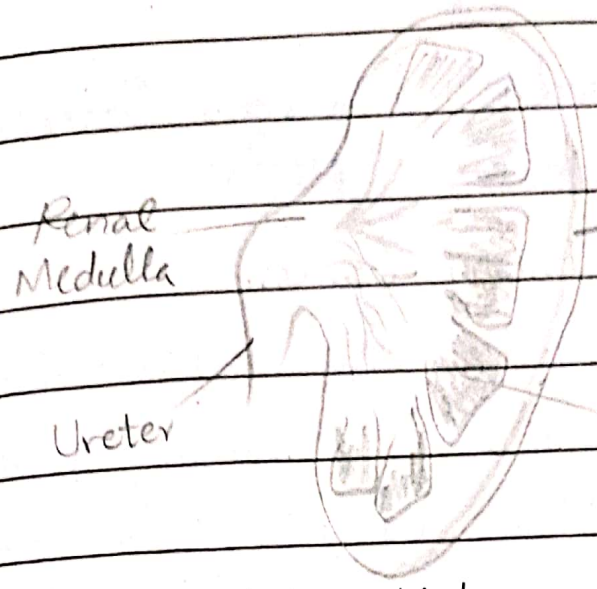


Figure: Human Kidney

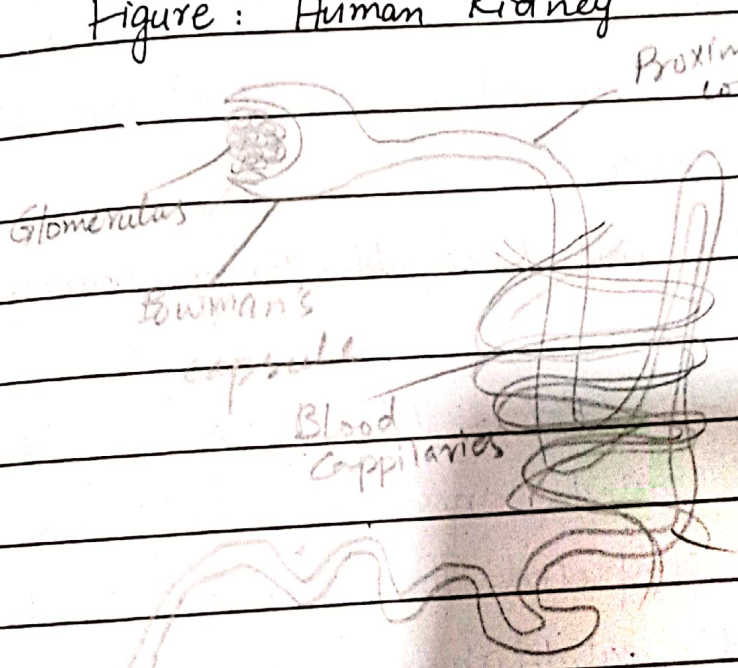


Figure: Nephron (Functional unit of Kidney)

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# (b)

## Renewable Energy Sources Under CPEC

- **Renewable Energy Sources:**

The sources of energy that can be generated again and again without depletion and are not harmful to the ecosystem and environment are called renewable energy sources.

- **CPEC and Renewable Energy sources:**

In the first phase of CPEC, there were many energy projects most of which have been completed. These energy projects included establishment of power plants from different sources renewable and non-renewable both. There were projects of energy from coal, and hydrocarbons as well as solar, hydal and wind energy.

# Renewable energy projects of CPEC:

- **Hydal energy Projects:**

CPEC includes hydal energy projects which is a renewable energy source project. The biggest hydal energy project under CPEC is in Gilgit. Bonji Dam is part of it.

- **Solar energy Projects:**

Another renewable energy project involves solar energy plant which has been operational under CPEC. This solar power plant is in Rahim Yar Khan and generates 300 MW of energy.

- **Wind energy projects:**

Port Qasim wind energy project is an important renewable energy project under CPEC. It generates energy from wind turbines.

Example

(C)

# "Part of Cell in Human Body"

Human Body is made up of billions of cells. These cells have different functions and different functional parts. Humans are eukaryotes so, the body contains eukaryotic cells.

## Structure of Human Cells.

Human cells are eukaryotic cells and have a large division of labour as well as a large number of organelles.

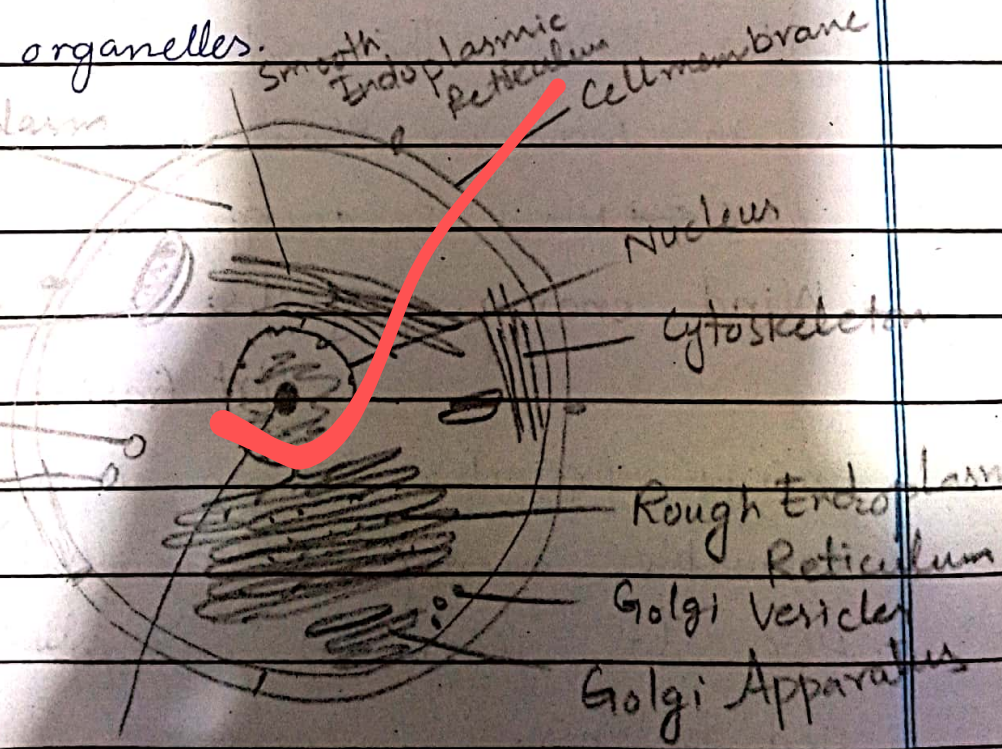



Figure = Human Cell

Human cell has a cell membrane which is partially permeable.

- Cell membrane:

Human cells have a cell membrane made of glycoproteins and lipids.

- Cytoplasm:

It has a cytoplasm where a number of organelles are embedded.

- Nucleus:

Human cells have a central nucleus containg genetic material i.e. DNA.

- Mitochondria

Mitochondria is present in cytoplasm and is power house of the cell.

- Endoplasmic Reticulum

There are two types of endoplasmic reticulum in human cells. i.e, smooth endoplasmic reticulum having no ribosomes attached to it and rough endoplasmic reticulum having ribosomes attached to it.

- Other organelles:

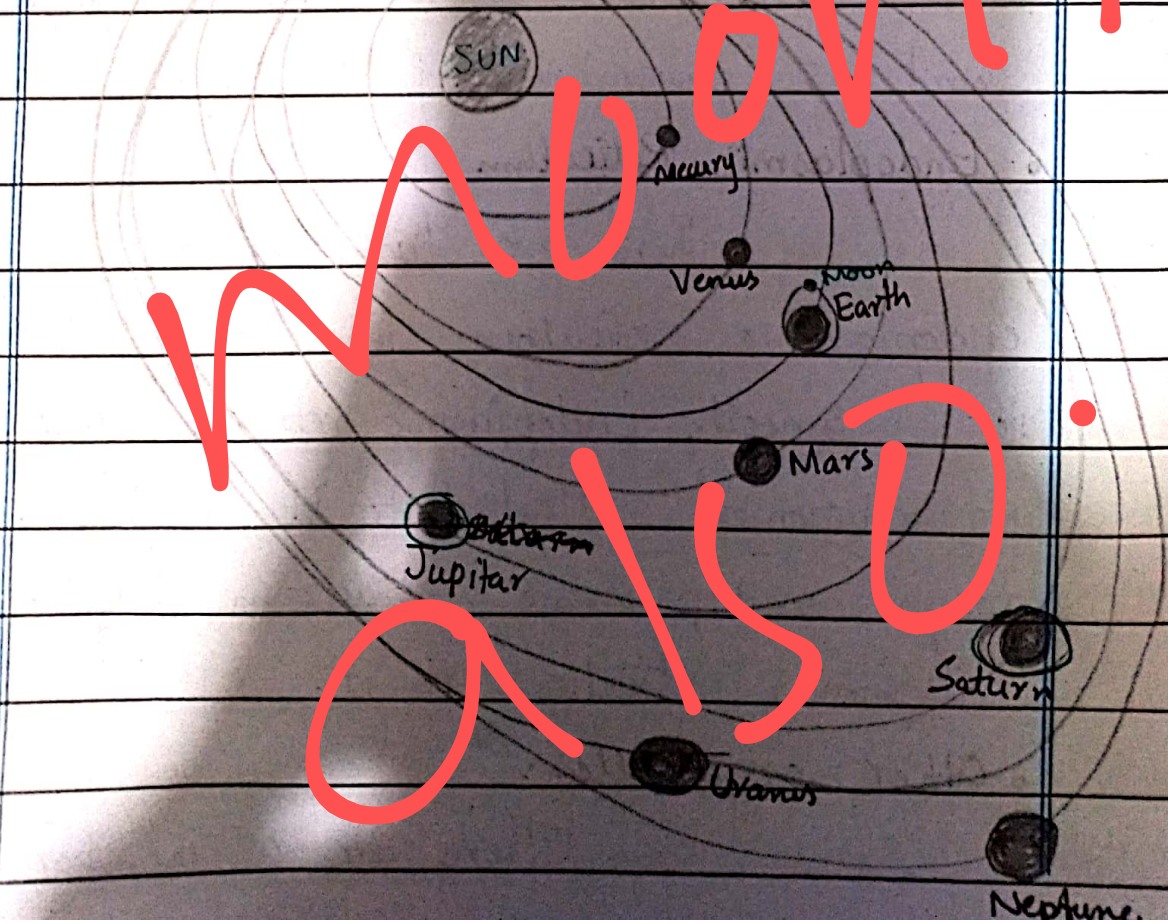
There are a number

of other organelles including golgi apparatus, cytoskeleton, lysosomes, etc. All these organelles perform their functions in a coordinated manner to ensure proper functioning of cells.

(d)

Solar System

show me also!



# SEC - II

## Q-6

### (b)

Solution:

Percentage of votes taken by candidate A = 30% of total

Person A defeated by = 15000 votes

No. of votes of winning candidate = ?

Total percentage taken by winning candidate = 70%

$x$ = 15000 + 30% of ~~losing candidate~~ votes

$x$ = 70% of votes So,

$$15000 + \frac{30}{100}x = \frac{70}{100}x$$

$$15000 = \frac{70}{100}x - \frac{30}{100}x$$

$$15000 = \frac{70-30}{100}x$$

$$15000 = \frac{40}{100}x$$

$$15000 = 0.4x$$

$$x = \frac{15000}{0.4} = 37500.$$

Since we assumed that winning candidate had 70% of votes so, we can find his number of votes by finding 70% of total votes i.e, 37500.

$$= \frac{70}{100} \times 37500$$

$$= 26250$$

So, the number of votes won by winning candidate = 26250 votes.

(a)

Ratio of pizza's share of x and y

x : y = 5 : 3

Number of slices in each pizza = 8

Number of slices eaten by x = ?

Number of slices eaten by y = ?

Total parts = 5 + 3 = 8

Slices of $x = \frac{5}{8} \times 8 = 5$ slices.

Slices of $y = \frac{3}{8} \times 8 = 3$ slices

(C)

40 liters of mixture of milk contains
= 25% of water

40 liters contain milk in mixture = 75%

How much water is added to mixture
= 10 liters

Percentage of milk in final mixture
= x

From the statement we concluded that initial mixture has 25% water and 75% milk.

Liters of milk in initial mixture =
75% of 40 liters

$\therefore \frac{75}{100} \times 40$

Milk in initial mixture = 30 liters

Water in initial mixture = 40 − 30
= 10 liters

In new mixture 10 liters water is added So,
new mixture has water = 20 liters

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Percentage of milk in new mixture = x.

Quantity of milk in new mixture = 30 liters

After adding the 10 liters of water the mixture became 50 liters.

So, ~~quantity of~~ percentage of milk = $\frac{30}{50} \times \frac{2}{100}$

= 60 %

So, the quantity of milk in new mixture = 60 %

(d)

10, 25, 20

تاریخ: ___/___/___

# Q-7

(a)

11, 13, 17, ~~23~~

11, 13, 17, 19, 23

The missing value is 19 as there are 2 series in the question. +2, +4.