

## Q no-2

(a)

Increasing levels of  $SO_2$  and  $NO_x$  are considered as threat

Explanation:

$SO_2$  and  $NO_x$  are oxides of sulphur and nitrogen. Their increasing level is considered as threat because they pollute atmosphere. This atmospheric pollution has adverse effects on living beings.

### Adverse effects of $SO_x$ and $NO_x$

① Lung diseases

$SO_2$  and  $NO_x$  intermix with air and cause disease like Asthma

② Skin irritation

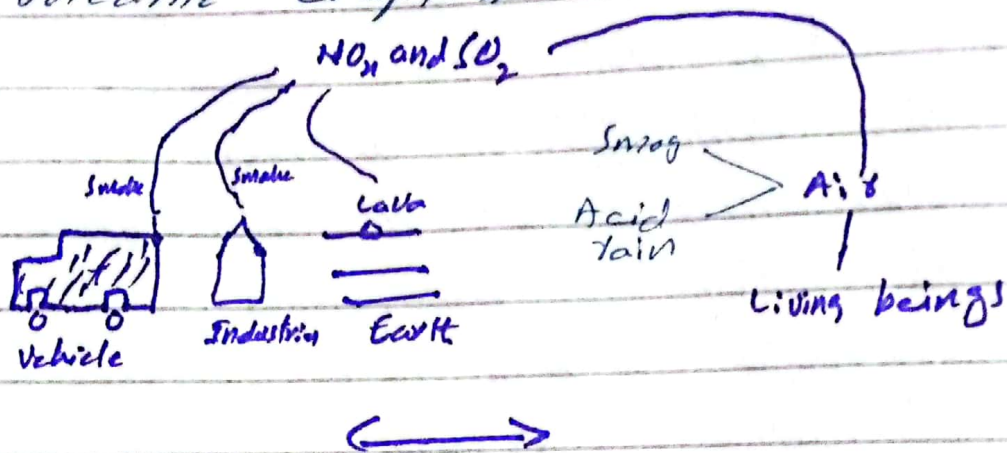
$SO_2$  and  $NO_x$  intermix with water vapours leading to acid rain.

③ Perilous for aquatic life

$SO_2$  and  $NO_x$  are threat to aquatic life as they turn water acidic.

## Sources of $\text{NO}_x$ and $\text{SO}_2$

The main sources of  $\text{NO}_x$  and  $\text{SO}_2$  are emissions from industries, vehicles and volcanic eruptions.



(b)

## The significance of GHE and explanation of enhanced GHE

### Green house effect:

It is a phenomenon in which gases like  $\text{CO}_2$  are released in atmosphere which trap the heat of the earth.

### Major green house gases

$\text{CO}_2$  and  $\text{CH}_4$  are major green house gases.



## Significance of Green House effect

- ① It prevents earth to turn cold.
- ② It helps plants grow.
- ③ It maintains temperature on earth.

## Enhanced GHE

### Explanation:

Enhanced GHE is that situation in which temperature of the earth is remarkably increased. This increase in temperature results in phenomenon of global warming that threatens existence of life on earth.

## Threats of Enhanced GHE

- ① Global warming
- ② Rise of sea level
- ③ Melting of glaciers and ice sheets
- ④ Increase in temperature



Q No-1

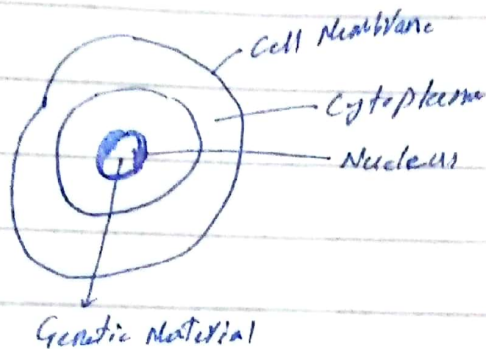
(d)

Differences between plant, animal and microorganisms cell

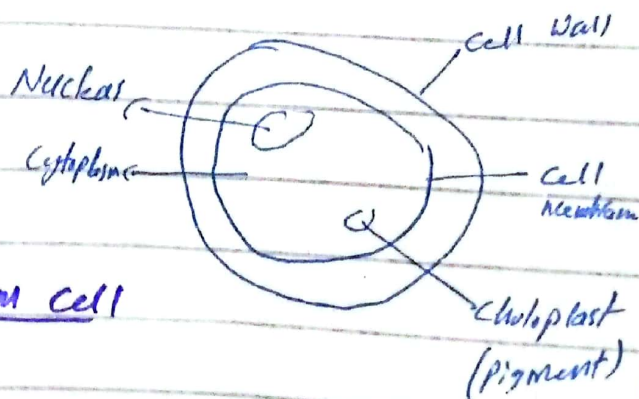
Cell:

It is the basic unit of life.

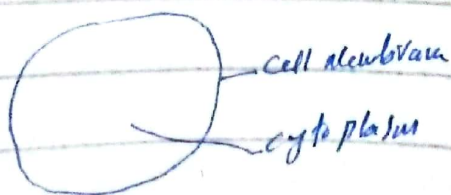
Animal Cell



Plant Cell



Microorganism Cell





## Differences between plant, animal and microorganism cell

| Animal cell  | Plant cell   | Microorganism cell   |
|--|--|--|
| <p>① Nucleus Position</p> <p>At the centre</p>   | <p>① Nucleus Position</p> <p>Peripheral</p>  | <p>① Nucleus Position</p> <p>No nucleus</p>  |
| <p>② No Cell Wall</p> <p>Animal cell has no cell wall.</p>   | <p>② Cell Wall</p> <p>Plant cell has cell wall which gives it green colour</p>                   | <p>② No cell wall</p> <p>Microorganism has no cell wall</p>  |
| <p>③ only cell membrane</p> <p>Animal cell has only cell membrane as its protecting wall from outer threat</p> | <p>③ Both cell wall and cell membrane</p> <p>Plant cell has both cell wall and cell membrane</p> | <p>③ only cell membrane</p> <p>It also has only cell membrane that protects it and transportation takes place through it in cell</p> |



(b)

## How do we see?

### Explanation:

Eye is an important sensing organ of our body. We see objects through eye. However, what we see goes through a long process that helps us to see objects.

### Process that helps us to see objects

#### ① Light

Light is a must for seeing objects. It falls on objects that helps our eye to see an object.

#### ② Retina of eye

The lights that falls on objects forms an image of that object

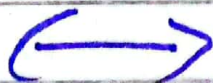
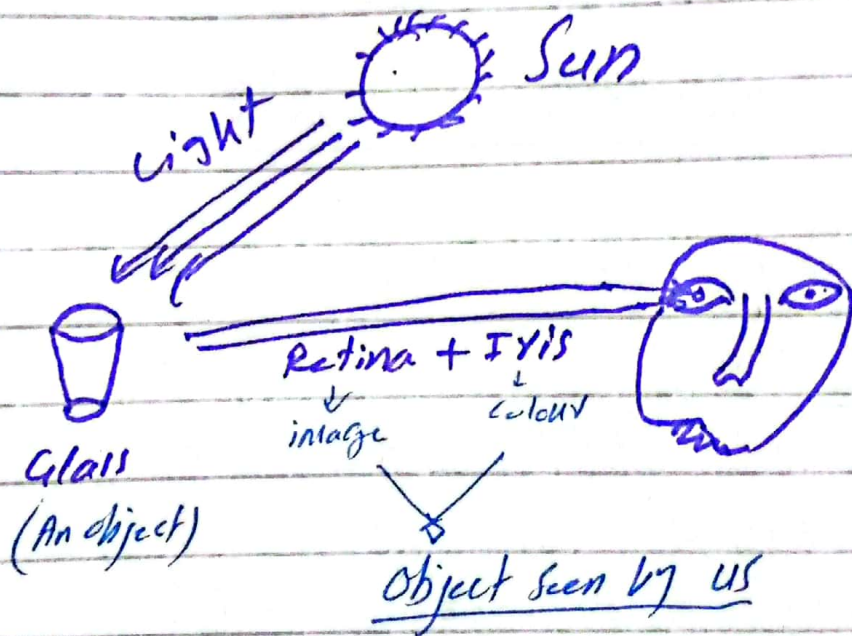


on retina of our eye.  
Thus, we see objects.

### (3) Iris of eye

The iris part of our eye gives colour to the object that we see.

### Diagram



(c)

## Importance and production of biofuels

### Importance of biofuels

Biofuels have great importance. They are environment friendly. If they are replaced with fossil fuels, they can help counter climate change.

### How they are important

- ① They are environment friendly.
- ② They help counter climate change.
- ③ They are available in abundance.
- ④ They can meet energy needs efficiently and effectively.





Q No-1

(a)

## Working of human heart

Human heart:

Heart is the main organ of the human body. It pumps blood in human body.

Size of human heart:

The size of human heart is that of fist of human being.

Heart beat:

The number of heart beats per minute are 72.

Chambers: 4

Working of human heart