

## General Instructions

Date: \_\_\_\_\_

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1. Give numbering to headings. (shading)
2. Do not write lengthy paragraphs. Write medium sized paragraphs with headings. (mock test)
3. Do not use table for comparison and contrast questions. (Science / Humane ability)
4. Draw figures/diagram/flowchart where needed. (D-No-9)
5. Start new question from fresh page.
6. Write unit of the answer in ability section. (part-4)
7. Explain mathematical steps and the reasoning for better score.
8. Change colour scheme for references to give them more visibility. Structure and functions
9. Manage time well. of human ear
10. Wide page borders are discouraged. Should be reasonable.
11. Introduction Avoid writing wrong references.
12. Give more weightage to expressedly asked part/s of the question. Human ear is consisted

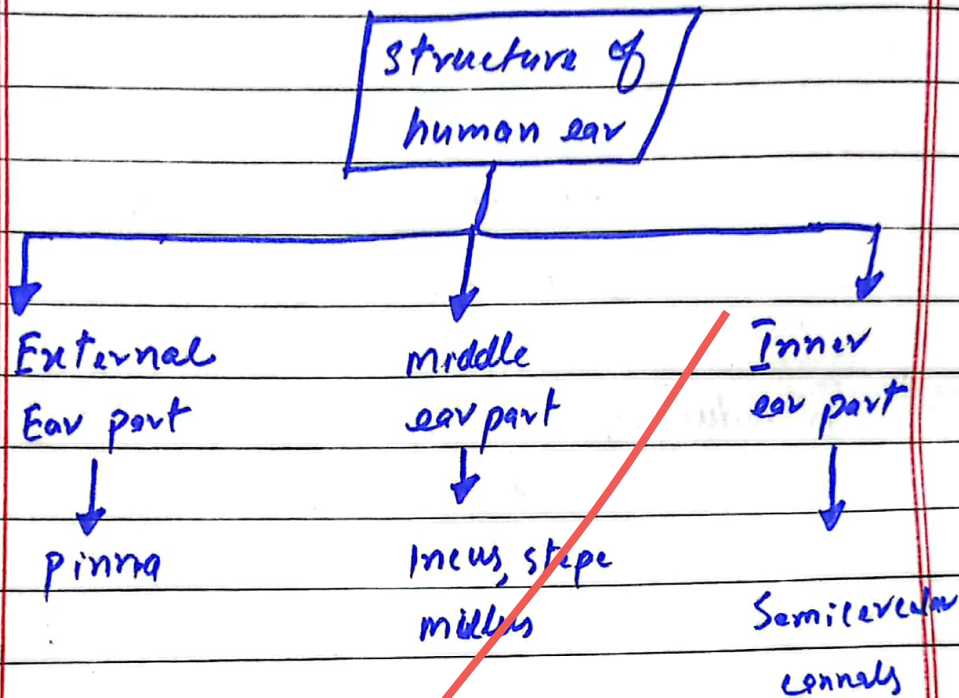
of many parts. It has pinna, middle part and internal part. They perform unique function in human. Indeed, the human ear help listen voice. It help men communicate with other men.

### Definition of ear

According to Milav and Harly, it is organ of human which help listen voice. Similarly it helps communication.

## ① Structure of human ear

That are discussed below.



### ① External ear part of human

It is outer part of ear. It consists of pinna. It is external part of ear. It helps in collecting voice from environment.

### ② Middle part of human ear

It is located in middle portion of human ear. It is divided

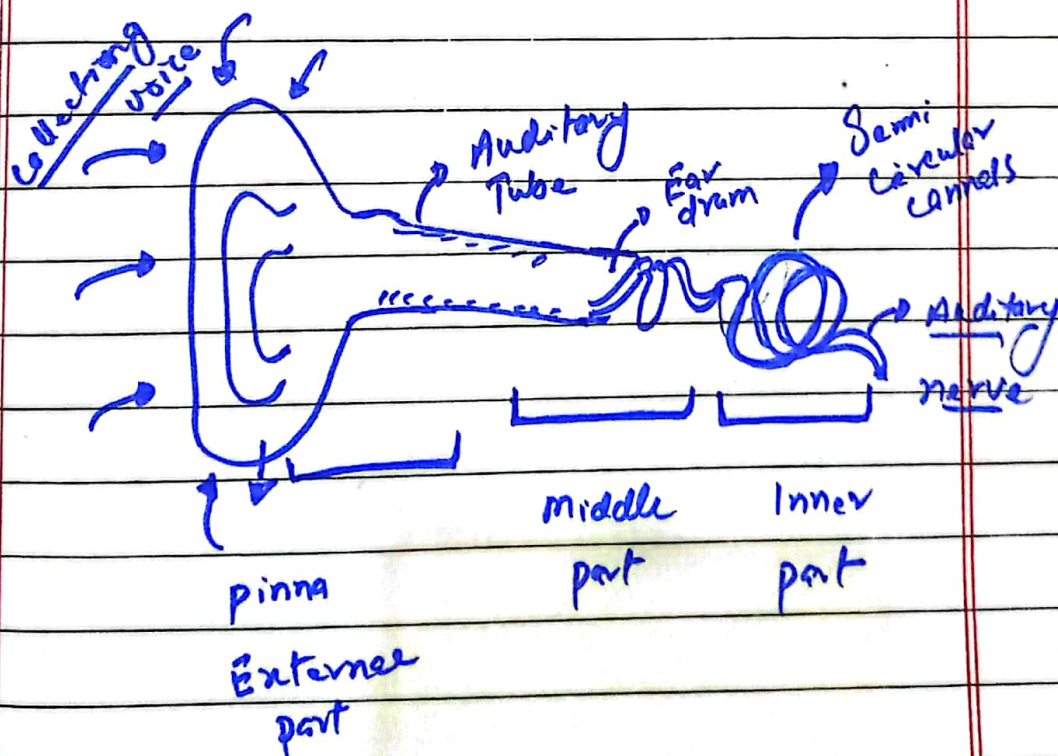


into further parts. It has Ear drum, oval window and three small bones that incus, malleus and stapes

③ Inner part of human ear

It is last part of human ear. It is located inside of the ear. It is divided into further sub unit. That sub-units collectively called Semicircular canals.

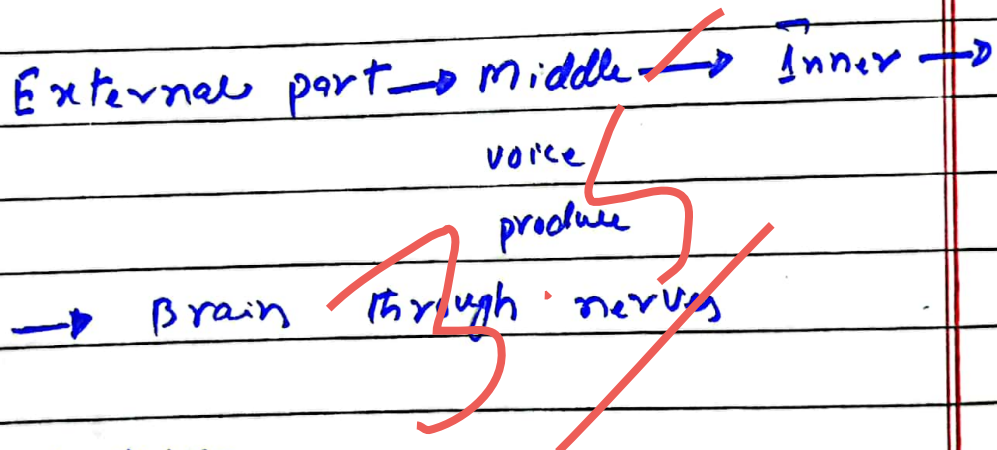
Structure of human ear



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## ① Functions of Ear

It does function of listening. It makes able a man to listen voices and give response accordingly. External Ear part receive voices from environment and send to middle part and then middle part send voices to inner part where message travel to brain



## ② Conclusion:

Thus, it was all about Ear structure and functions. Ear is divided into many parts and each part has its different function.

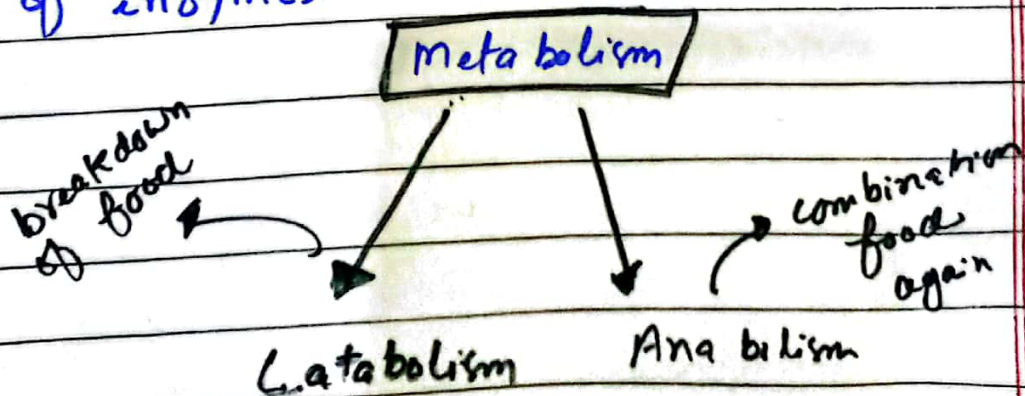


(Part- B)(A) Introduction:

Digestive system perform unique function in animal body. It helps breakdown food. It provides energy to animals to survive. Small intestine has great role in digestion. It helps food breakdown with help of enzymes.

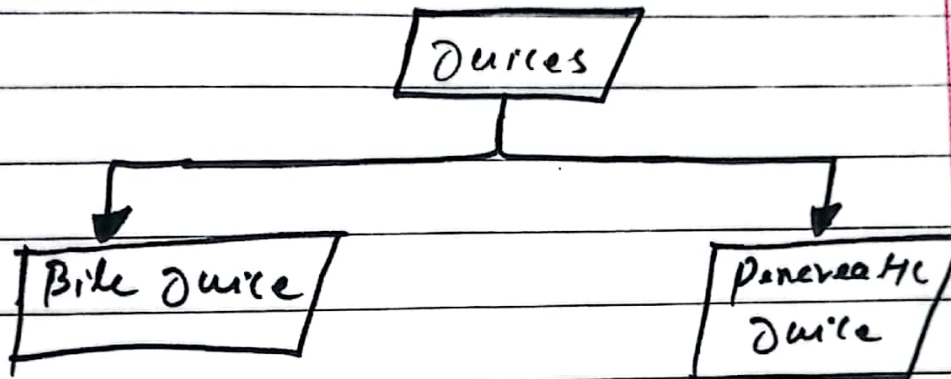
(B) What is digestive system?

According to Lambel (Biologist), it is a system in which food breakdown into its smaller parts and absorb in body. Food breakdown required different types of enzymes.



Q) What is role of small intestine in digestion?

Small intestine plays important role in the breakdown of food. It receives two types of juices from pancreas and bile.



① Bile Juice

It forms in liver and stores in gall bladder. It has different types of enzymes which help breakdown of food in intestine. Like lipase

② Pancreatic Juice

It forms in pancreas. It receives small intestine through pancreatic



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## Parts of small intestine, their individual roles

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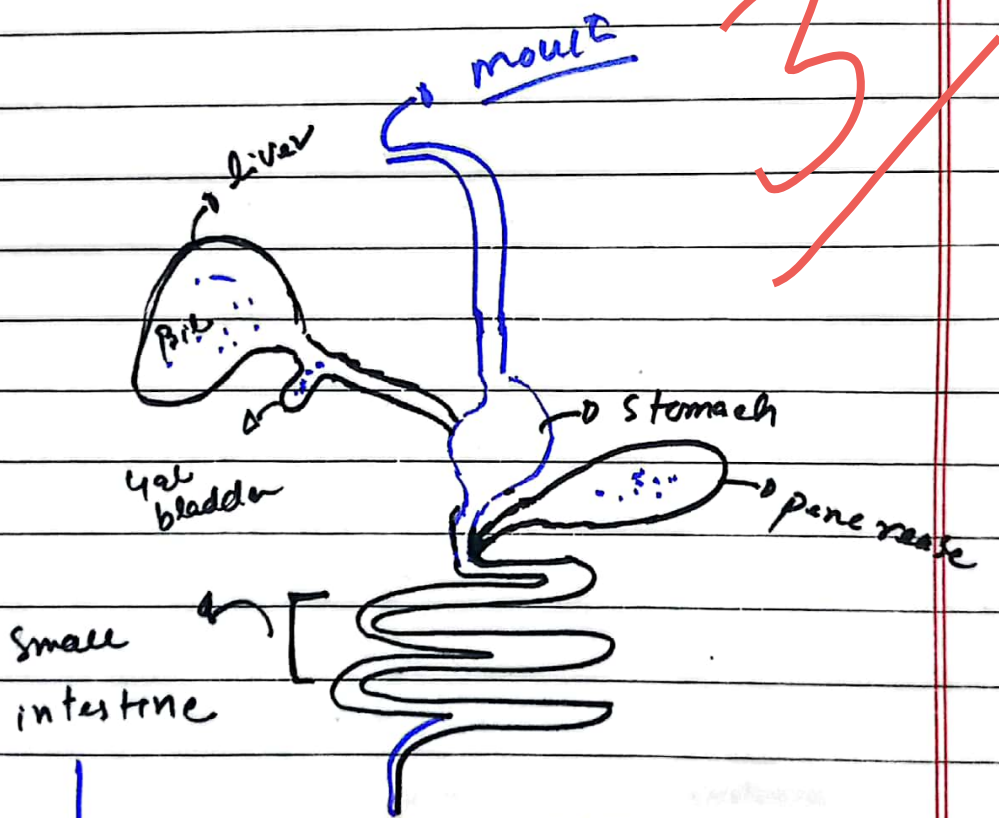
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duct. It has multiple enzymes like lipase, Fructase, protease and it help in neutralizing pH level of intestine.

lipase → For lipid

protease → For protein

Fructase → For carbohydrate



Breakdown of food

lipid, carbohydrate

and protein and finally

start absorption of food

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## Conclusion

Thus, it was all about digestive system and small intestine. Small intestine helps breakdown of food.

## (part - C)

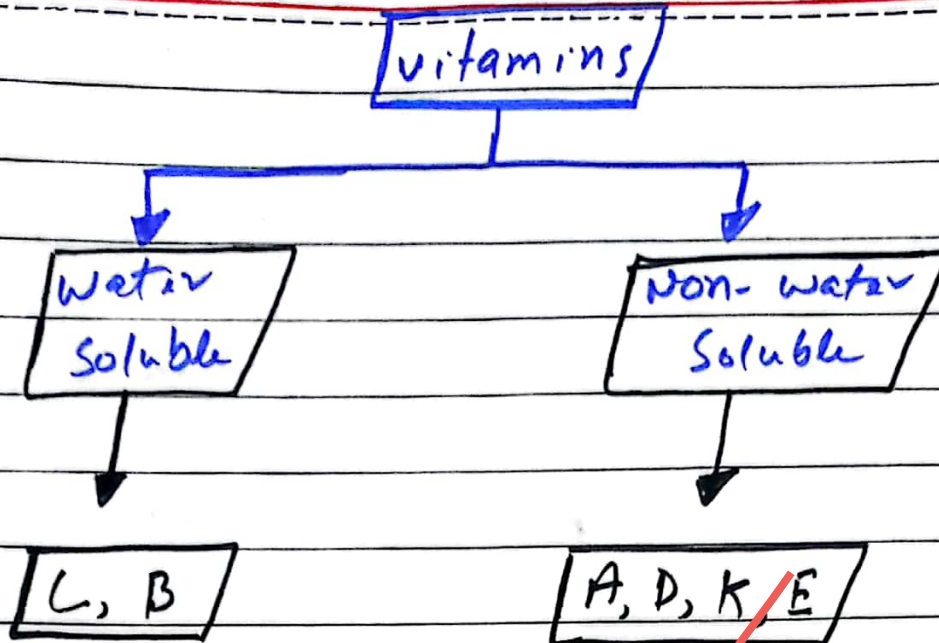
### (A) Introduction

Vitamins play important role in human body. They were divided into two categories one is called water soluble and second one is called water non soluble. However, they perform different functions in human body.

### (B) Types of vitamins

Generally, they have divided into two parts that are discussed below.





### ① Water Soluble vitamins

These are those vitamins which can easily soluble in water. That is called water soluble vitamins.

vitamin C is necessary  
for bones

### ② Non water soluble OR Fat soluble vitamins

These are those vitamins which are soluble in fat but not in water that is called

Fat soluble vitamins

A vitamin For Eye

K vitamin For Blood clot

D vitamin For Bone

↳ Sources vegetable  
(Green) and  
protein

### Conclusion

Thus, it was all about vitamins. Indeed, vitamins are two types. One is water soluble and second one is fat soluble.

(Part - D)

(Describe the function of  
pituitary glands)

(A)

Function of pituitary gland

What is pituitary gland



It is small gland which is located in the brain and close to thalamus and hypothalamus. It perform different functions by releasing hormones or stimulating other glands.

### Functions of pituitary gland

It releases different types of hormones which perform different functions in animal body. It also stimulates other glands of the body to release hormones.

parts of pituitary gland

```
graph TD; A[parts of pituitary gland] --> B[Anterior part]; A --> C[posterior part]
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Anterior part

posterior part

#### ① Anterior part of pituitary gland

It releases approximately six types of hormones.

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① prolactin hormones

It helps in synthesis of milk in mother

② Sex hormones

FSH and LH

(Follicle stimulating Hormone and Luteinizing Hormone) are those hormones which help in the formation of sex hormones

↳ Estrogen and progesterone in female

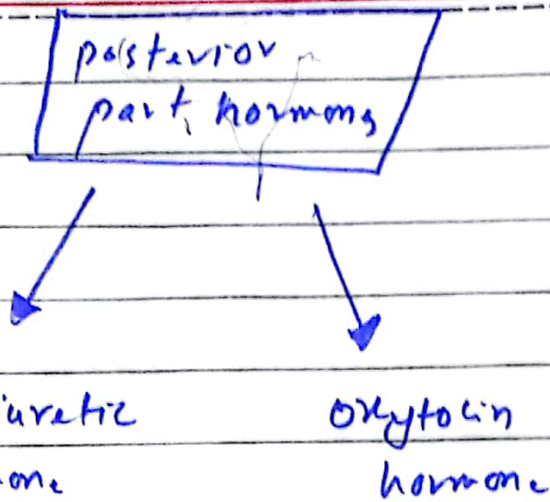
③ Growth hormones

Anterior part of pituitary gland releases Somatotropin (Growth hormone) to ensure growth in child and adults

④ posterior part of pituitary gland

It releases two hormones. That are discussed below:





### ① Antidiuretic

It releases from posterior part of pituitary gland. It helps in the reabsorption of water and minerals in the body.

### ② Oxytocin

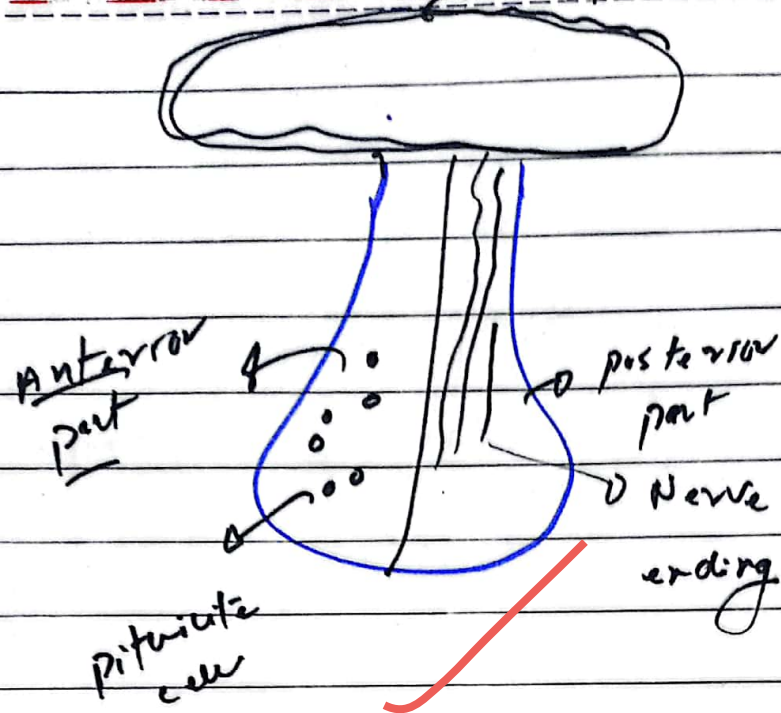
It releases from posterior part of gland. It helps in contraction of muscles, specially during child birth.

Diagram of pituitary gland



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(Q-NO-4)

(part- A)

(A) What are the causes of land pollution

There are many causes of land pollution. But, some of them important are listed below.



① Climate change is 1 major element of land pollution

② Domestic waste is also major cause of land pollution people dump their houses wastes in streets, which is threat for land environment.

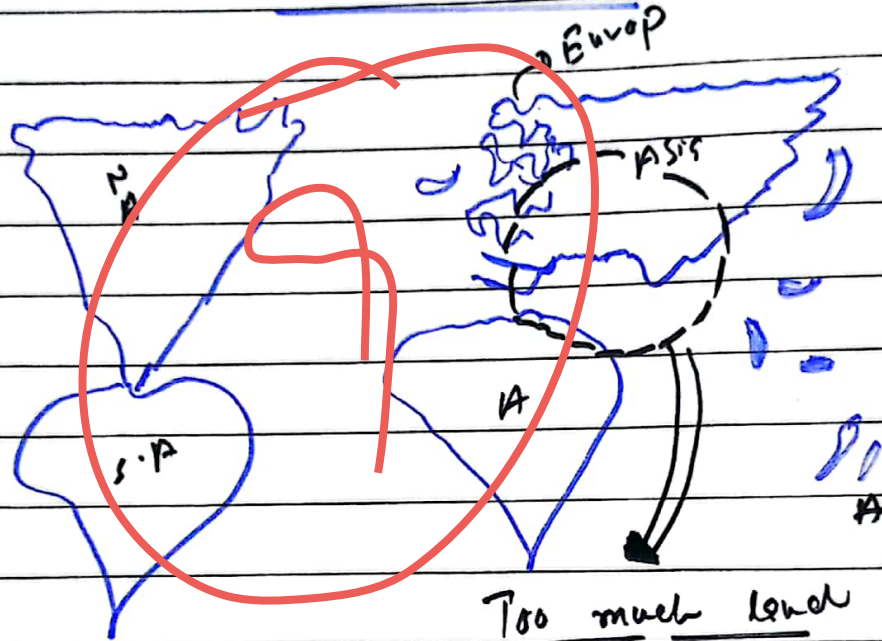
③ Industrial waste is another big problem for land. It also destroys the land natural environment.

④ Deforestation is another major problem for land. It contributes to land pollution.

⑤ Increasing population is also major cause behind the pollution of land

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World map shows  
where too much  
land pollution occurs  
in the world



Too much land  
polluted areas  
in the world

(Part-13)

① What are main goals of  
cop27

In cop27 meeting  
 countries have decided to  
 counter the devastating impacts  
 of climate change. The main goals



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are enlisted below.

- ① Economic advanced countries have pledged to give financial assist to developing states, which are vulnerable to climate change  
100 billion dollar  
financial assistance
- ② Developed countries will give technological assist to less developed country to reduce the impacts of climate change.
- ③ Industrial states should reduce their carbon emission.
- ④ Reduce the usage of non-renewable resources
- ⑤ promoting usage of re-newable resources in the world  
like solar, wind and hydro energy

UN General ~~Secy~~ Secretary  
said that it is responsibility  
of developed world to  
provide financial and  
technological help to  
developing world to fight  
against natural calamity.

(Part-D)

What are fundamentals  
of artificial intelligence

The fundamentals  
of artificial intelligence  
are given below.

- ① AI can store the data  
of anything.
- ② AI help in surveillance
- ③ AI can enhance the  
security.



4) It can interpret the data which is stored in machines

5) AI enhances the efficiency of work

6) AI be controlled by human  
irrelevant answer.

7) AI can gather the data

(part C)

### Role of GIS in environmental science

Geographic System has Global information great role in environmental science. That are discussed below.

① Identify the intensity of natural hazards

GIS helps identify the intensity of natural hazard. It has

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about flood, high rain falls  
and endemic.

② It helps recognize the  
impacts of climate change

It gives information  
to environmentalist about the  
devastating impacts of climate  
change

③ help in weather patterns

GIS helps getting  
information of weather patterns.  
It tells about weather how  
it changes with passage of  
time

④ It helps epidemic situation

GIS help identify  
the severity of disease in  
particular areas through satellites.  
It gives information about mortality.



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General Science /  
ability

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(part- B)

SISTER will be

↳ NHRSDB

In this code we take  
one digit behind original  
one like before S N  
comes. So, similarly, we  
follow the same thing

(part- A)

Increases oil.  
price to

20  
100

16 is  
original  
price

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Q-no-8  
part-B

Arithmetic mean of nos  
of 1<sup>st</sup> five prime numbers

① 3, 5, 7, 9

$$1 + 3 + 5 + 7 + 9$$

$$\frac{25}{5}$$

5  
mean