Q # 3 (b)

Earth Quake :

Intense shaking of the earths surface caused by the sudden movement in its layer known as an earthquake natural disaster

Causes :-

1. Fault Zones

2. Plate tectonics

3. Volcanic activity

4. Human activities

Elastic Rebound theory

Measurement of earthquake :-

Since earthquake is exhibited in the form of seismic waves, experts use ~~these~~ ~~various~~ seismometers to record the seismic waves produced by earthquake.

Shallow focus Earthquake :-

1. Earthquake occur anywhere less than 70 km from the Earth's surface are called Shallow focus earthquake.
2. They are called crustal earthquakes.
3. They occur quite frequently and at random.
4. majority of earthquakes are of smaller magnitude. They are often not felt.
5. It poses greater threat at the surface as all energy is directed towards a small area.

Deep focus Earthquake

Earthquake deeper than 70 km from earth's surface are called deep-focus earthquake.

2. They are triggered by the collision between plates.

3. They have high magnitude.

4. It donot cause much damage as focus of earth lies at great depths. ~~and~~

The strongest deep-focus earthquake ever recorded is of magnitude 8.3, where as the deepest earthquake is 735.8 km

0km
shallow focus earthquake
70km
Depth (km)   Intermediate focus earthquake
300km
Deep focus earthquake
(735.8km)
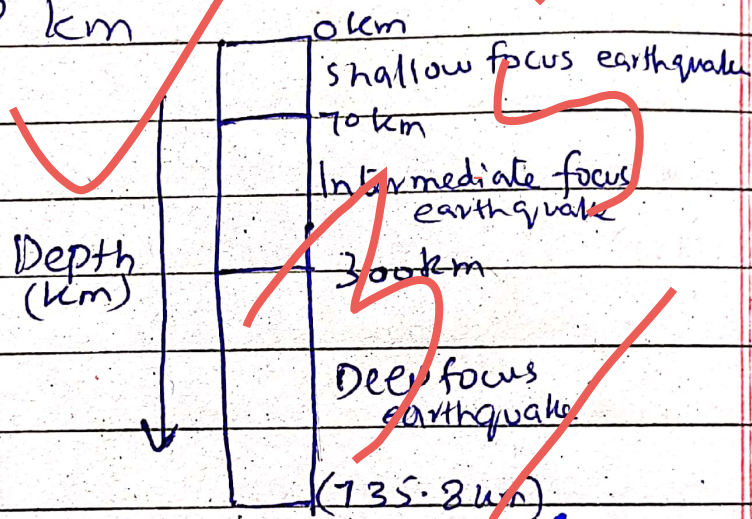
Magnitude of Earthquake (Morrocco)

→ The magnitude of earthquake in morrocco is 6.8 recently occured on 18 September 2023 which shattered millions of lives and massive devastation occured.

Date:_____

Cyclone :-

Cyclones are large Tropical Storms revolving by winds blowing in low atmospheric pressure

Causes of Cyclone

cyclone are caused by atmospheric disturbance at a low in low pressure area

It is spiral in motion winds are rotating clockwise in northern hemisphere and anticlockwise in southern hemisphere

Tropical cyclone are the most damaging and destructive where the winds are strongest and rainfall are heavier that region is specifically called eye wall. Some time these destructive cyclone cause flooding very strong winds damage houses & trees.
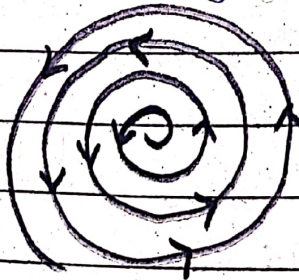
Anti-Clockwise motion
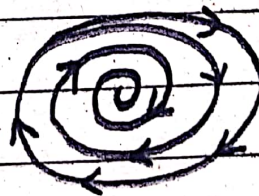
Clockwise motion

Question: 3 (d)

Covalent Bond

Def :- Covalent bond involve sharing of electrong between two or more atoms

· It is held together by strong bond

· It exist in all 3 states liquid, solid, gas.

· It has low melting point.

· It is in soluble in water.

E·g :- HCl etc.

· It has low attraction between molecules.

Ionic Bond.

Def :- Ionic bond forms when two or more ions come together and are held together by causing difference in charge on it.

· It is held together by ion

· It forms by the complete transfer of election.

· It exist in solid state.

· It has high melting point.

· It is soluble in water.

E·g : NaCl , K_2SO_4

· It has high attraction b/w molecules

Q # 3 (C)

Dengue fever

Def:- Dengue fever is one of the painful, infectious fever caused by mosquito. It is cause by one of the 4 dengue viruses.

• **Causes :-**

Primary Cause: It is caused by the mosquito which is infected with on of the type of dengue virus ~~fever~~. It is spread through the bite of mosquito.

It is transmitted by female mosquito.

The <u>symptoms</u> develop in 6-7 days after being bitten by mosquito.

The various symptoms are loss of appetite, Diarrhea, vomiting, fatigue etc.

• **Preventive Measures**

The preventive measures include the hygenic and sanitation, to clean surrounding by removing waste.

- Covering body fully.
- Using mosquito repellents.
- Doctors used to take the blood sample of the patient and treat them accordingly by prescribing them medicines.

Human Ear :-

Def : Ear is the sensitive part of human body. It is concerned with transmitting and detection of sound.

Parts of Ear :-

Ear consist of 3 parts

a) External Ear :-

It is further divided into 3 Parts :-

1. **Pinna** : It is the thin cartilage covered in skin. It has funnel like carves. It receive and transmit sount to middle ear.

2. **Meatus** : It consist of the internal wax gland it joint the internal part with external.

3. **Tympanic membrane** : It seperate middle ear from external ear.

b) Middle Ear :-

It Joins both the ~~middle~~ External and internal ear. It include the smallest bone of human body called Stapes. The sound travel through this passage.

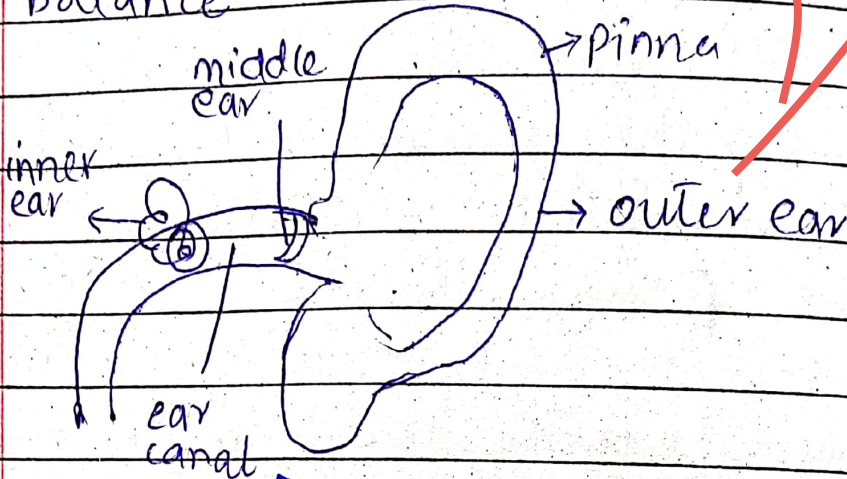### c) Internal Ear :-

It include the sensory receptors responsible for hearing

Function :

The main function of ear is hearing. It involved, detecting, transmitting and maintaining a sense of balance in sound.
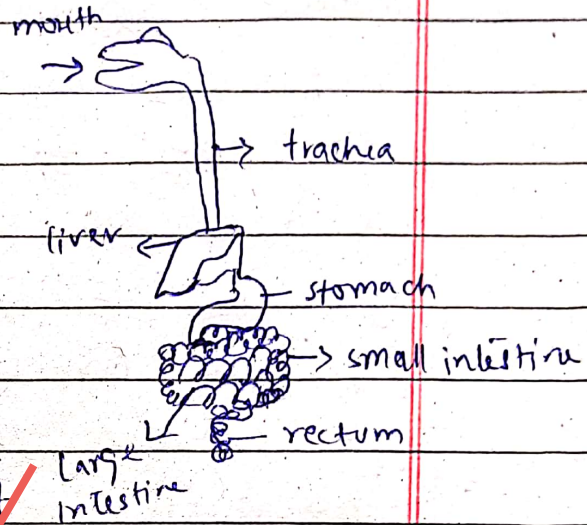

Diagrame: Human Ear

Digestive System :-

The digestive system starts from mouth and end at Anus. It include different parts of human body such as pharynx esophagus, pancreas, stomach, small intestine, large intestine Excretory system (rectum), Anus.

Digestion Process:

Ingestion is the first step in digestion, intake of food occurs in mouth. Then the second step is mixing and movement the curnning of food through teeth along with the secretion of sliva. the food (bolus) is divided into small parts It is then processed in stomach include small intestine & large intestine. Here the required enzymes are mixed in blood are carried to the body while the waste products is passed into the large intestine in the form of defecation it exit the

mouth →

→ trachea

liver

stomach

→ small intestine

rectum

Large intestine

human body through the anul canal.

Role of small intestine in digestion :-

Small intestine is a thin long tube like coiled structure lower in the human body present behind stomach.

The main role of small intestine is the break down of food to absorb nutrients needed to the body and get rid of the waste product. It act as a barrier also to inhibit the entry of bacteria.

It is involve in digestion and absorption of food.

Parts of small intestine and their respective functions?

Vitamins

Def :- Vitamins are micronutrient required to the body to perform several functions. It is present in the food.

Vitamins are the natural and essential nutrients. The major role of vitamins ~~are~~ is growth and development, repairs the wounds, make healthy bones and tissues to protect immune system.

Types and Parts :-

There are 13 different types of vitamins.

The are divided on the basis of Two main parts.

1- Water soluble vitamins

2- Fat soluble vitamins
   ↳ stored in fat cells. It include Vitamin A, D, K etc.
while water soluble vitamins are not stored in the body but excrete through urine. It include Vitamins B and C.

Sources :-

Vitamin A is found in vegetables like potato, carrot.

. Vitamin D in milk
. Vitamin E,K in leafy green
vegitables
. vitamin C in oranges & citrus
fruits.

Q # 5(d)

Pituitary glands :-
Pituitary gland is a small
pea like structure in Brain
It is also called master gland
Function :-
The main function of pituitary
gland is to secrete harmones
to regulate growth, reproduction
It is controlled by hypothalamus
Pituitary gland produce oxytocin
Thyroid stimulating harmone is
also secreted by pituitary
gland which tell thyroid
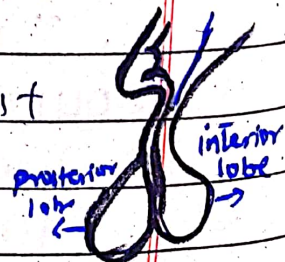gland to make harmone also
Adrenocorticotropic harmone
is released by Adrenal gland Infundbalium
to make harmones.
Prolactin control the breast
milk production.

Pituitary
gland → posterior interior
lob lobe

Q# 6 (a)

Series:-

(i) 10, 100, 200, 310, __430__

Sol:-

$$10 + 90 = 100$$
$$100 + 100 = 200$$
$$200 + 110 = 310$$
$$310 + 120 = 430$$

$$\begin{array}{r} 310 \\ +120 \\ \hline 430 \end{array}$$

(ii) 3, 7, 23, 95, __479__

$$3 \times 2 + 1 = 7$$
$$7 \times 3 + 2 = 23$$
$$23 \times 4 + 3 = 95$$
$$95 \times 5 + 4 = 479$$

$$\begin{array}{r} 95 \\ \times 5 \\ \hline 475 \end{array}$$

Q# 6 (c)

Solution:

Let Romi age = x

Nisha present age = $(x + 15)$

Nisha age 5 year ago $(x + 15 - 5) = x + 10$

Romi age 5 year ago = $x - 5$

After 5 year, Nisha 3 time old

$$(x + 10) = 3(x - 5)$$
$$2x = 25$$
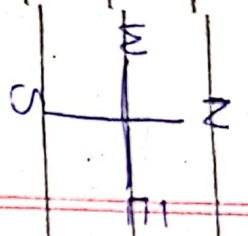$$x = 12.5 \rightarrow (\text{Romi's age})$$

Nisha's age = $x + 15$
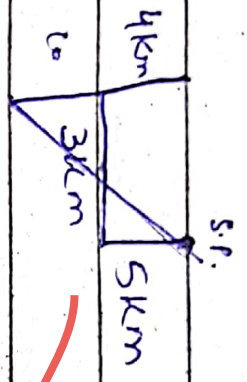Putting value in the position
$$= 12.5 + 15 = \boxed{27.5 \text{ yrs}}$$

Hence, the present age of Nisha is 27.5 years.

Q # 8 (a)

Sol:-

The man is in south-west direction

Q 8 (b)

Solution:

First 5 prime numbers are

2, 3, 5, 7 and 11.

Arithmetic mean = $\dfrac{\text{Sum of 5 no.}}{\text{Total prime no.}}$

$$\text{mean} = \frac{2+3+5+7+11}{5}$$

$$\text{mean} = \frac{28}{5}$$

$$= \boxed{5.6}$$

Date:_____ **Q8 (C)**

Sol:- Time = No. of workers/rate of work × original time

$$Time = \left(\frac{70}{50}\right) \times 40 = 56 \; days$$

70 men will take 56 days to constructs the roads.

Q8 (d)

ol:- property left by zahid = 1750,000

Debt = 150,000

remaining = 1600,000

Dividing it by 3

$$= \frac{1600,000}{3}$$

uble Son's share

$$2(533,333)$$

Rs 1066,66

which daughter share will be Rs 533,333

$$\begin{array}{r} 1750000 \\ - 150000 \\ \hline 1600000 \\ \hline \end{array}$$