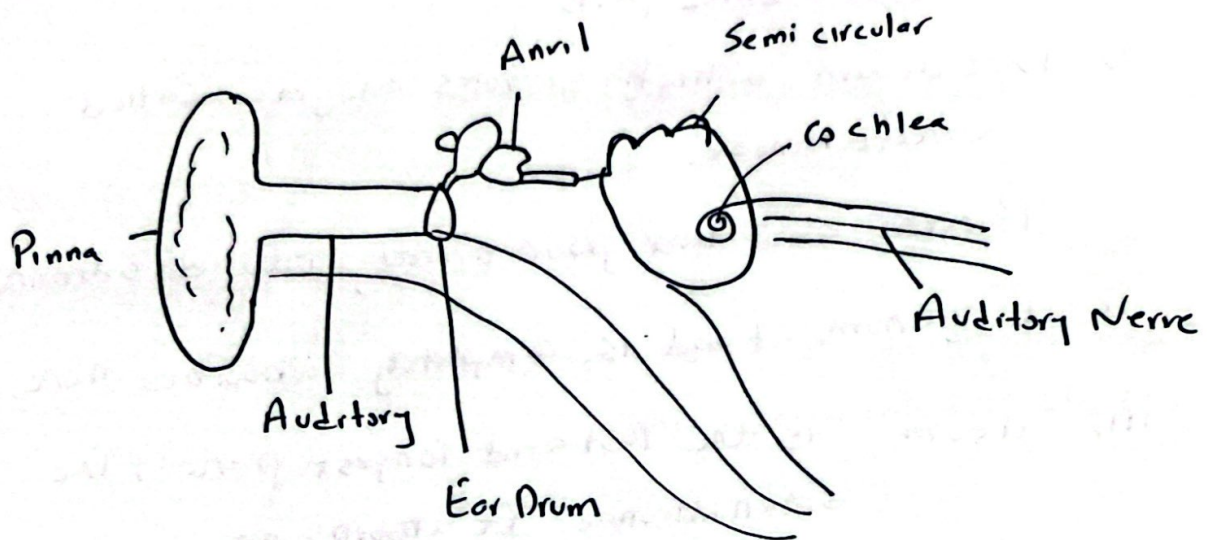


September Mock

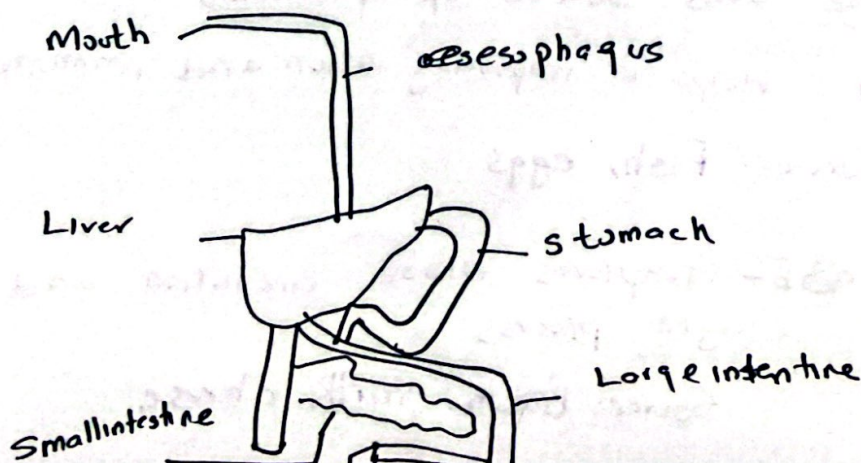
Q5 a Give structure and function of human ear



Function of Human ear

- 1) It helps in maintaining body weight
- 2) It is responsible for hearing as they contain sense organs which convert the energy outside the ear into the inside of the ear.

b) What is digestive system. What is the role of small intestine



Role of small intestine

Small Intestine is the major site of food absorption

It contains three parts

i) Duodenum which secretes enzymes called enterokinase.

Pancreas and liver pour directly into duodenum

ii) Jejunum : Food is completely absorbed here.

iii) Ileum : is the last and longest part of the small intestine. It absorbs any final nutrient with major absorptive products being vitamin B12 and bile acids.

c) Short note on vitamins

Vitamins are minerals which are essential for body functions and helps to fight infection, wound healing, makes bones strong and regulating hormone.

Importance and source of Vitamins

Vitamin A : Helps in improving vision and immune system

Source: Fish, eggs

Vitamin B₁₂ - Improves blood circulation and aging process

Source: Butter, milk, cheese

Vitamin C - Helps to treat scurvy, cancer and common cold

Source: Citrus fruits

Vitamin D - Helps to fight Arthritis, tooth decay and rickets

Source: Milk, cheese

Vitamin K - Reduces risk of menstrual pain and slows down internal bleeding

Source: greeny vegetables

Vitamin B1 - Maintains overall weakness and regulates hormones.

It also helps to maintain regular heart rate.

Source: Cereals.

Vitamin B2 - It is essential for energy and cell growth

Source: Milk

Vitamin B6 - Helps in improving brain function and metabolism.

Source: Wheat ~~starch~~^{corn} oil

d) Describe the function of pituitary gland

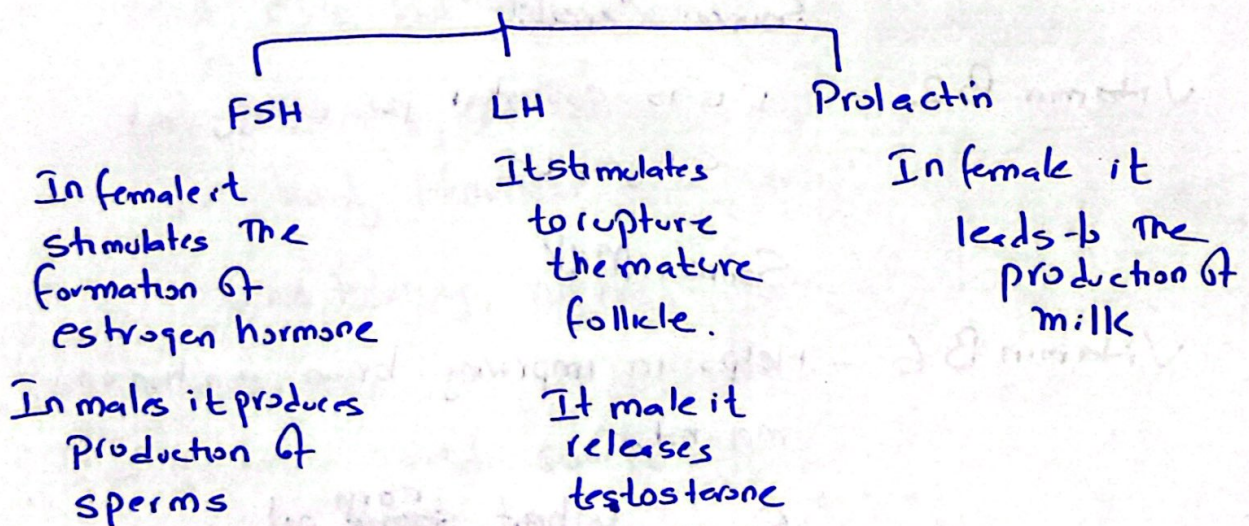
1. Introduction

It is known as the master gland of the body. It is located in brain and have 3 lobes

a) Anterior lobe : This secretes the following hormone
Somatotrophin Hormone: It is the growth hormone
It is secreted throughout the life.
Thyroid Stimulating Hormone:

Adrenocortico hormone: This secretes Adrenaline when the body is in stress.

Gonadotrophic hormone: There are 3 types in this



b) Median Lobe

This secretes only one hormone called Melanophore Stimulating Hormone.

This hormone produces the brown pigment melanin which gives color to skin

c Posterior lobe

This act as a store house for hormones which are secreted through hypothalamus.

i) Anti Diuretic Hormone: This is released when the level of water is low in blood.

ii) Oxytocin: It causes the contraction and relaxation of uterus during child birth

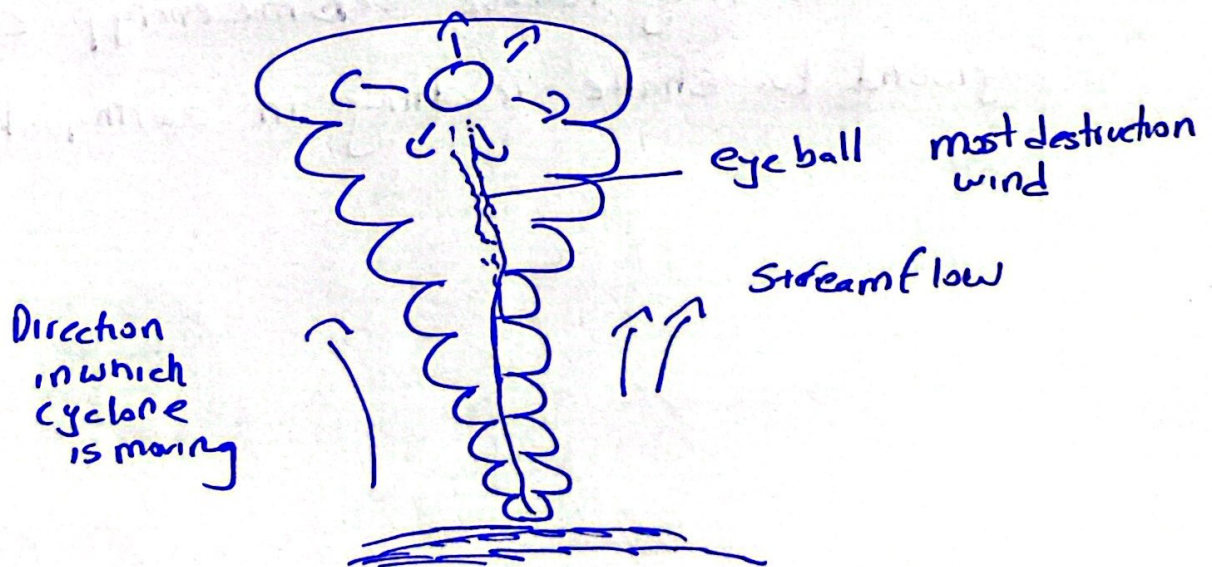
Question No 3

a) What causes a cyclone. In which part of the cyclones are the winds strongest and destructive

1. Introduction

Cyclones are formed over warm water when the sea surface temperature is at least 26.5 degrees Celsius. The heat from the ocean surface fuels the storm, causing warm air to rise and create a low-pressure system. As warm air ascends it cools and condenses which intensify the storm

The eye ball in the cyclone is most destructive as it is characterised by ring of towering thunderstorm.



b. What are shallow focus and deep focus
What causes earthquake.

1. Introduction

Shallow-focus earthquake begins where the crustal plates of the earth are moving against one another. Deep focus earthquake begins when the tectonic plates moves under another or sub-ducts at the boundary of the continental plates.

Earthquake are caused when the movement of tectonic plates beneath the Earth's surface. When these plates interact at plate boundaries stress builds up and when stress exceeds the strength of rocks, they release seismic energy causing ground to shake - resulting in earthquake

c) Write a note on Dengue fever. What are the primary ~~and~~ causes and what preventive measures can be taken to avoid dengue infection?

1. Introduction

Dengue fever is caused by a bite of a female mosquito called *Aedes Aegypti*. It results in high grade fever and the platelets of the humans are impacted in it.

Bite of *Aedes Aegypti*

↓
Virus penetrates into skin

↓
virus infects & replicates into Langerhan cells

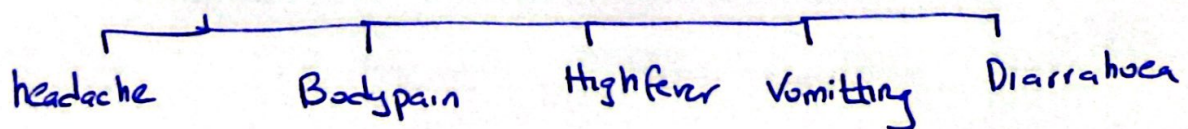
↓
Infected Langerhan cells go to lymphatic system to make immune system alert

↓
enters blood stream

↓
decrease white blood cells

↓
results in dengue.

2. Causes of dengue fever



Every year 400 million people get infected from Dengue.
(World Health Report)

3. Prevention from Dengue

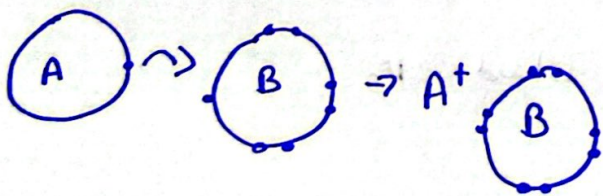
- i) Use Insect Repellent
- ii) Don't go outside at night
- iii) Maintain pest control inside & outside of your house
- iv) Wear full sleeves
- v) Use Bed nets

d. Distinguish between ionic and covalent bonds with examples.

Ionic Bond

- 1) It is the bond which is formed with two opposite charge ions.
- 2) They exist in solid state
- 3) They have high melting and boiling point
- 4) They are soluble in water
- 5) They are good conductors of electricity

Example
NaCl



Covalent Bonds

It is the mutual sharing of one or more pairs of electrons.

They exist in all three states solid, liquid and gases

They have low melting and boiling point

They are insoluble in water

They are insulators they do not conduct electricity

Example H₂

