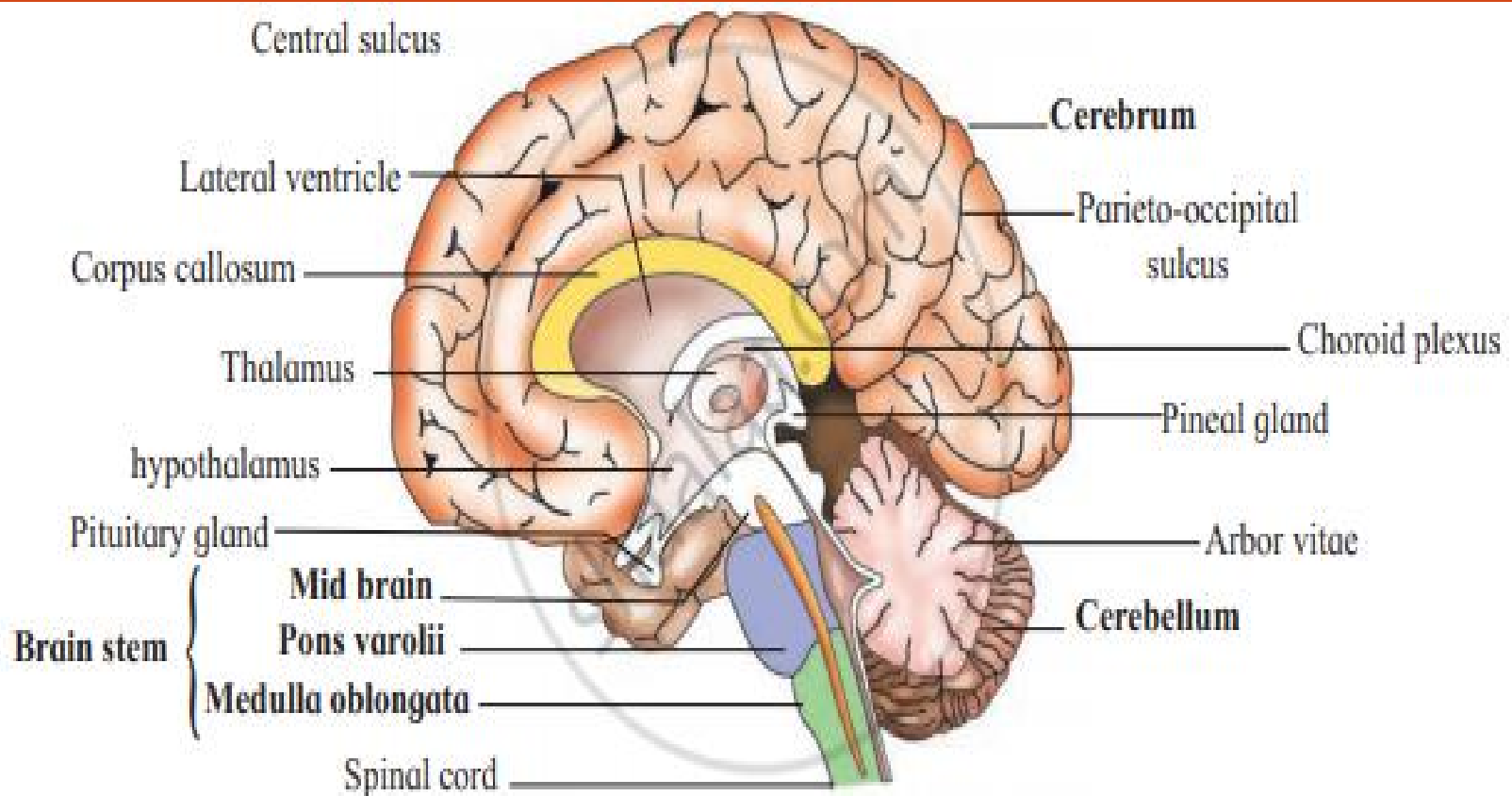


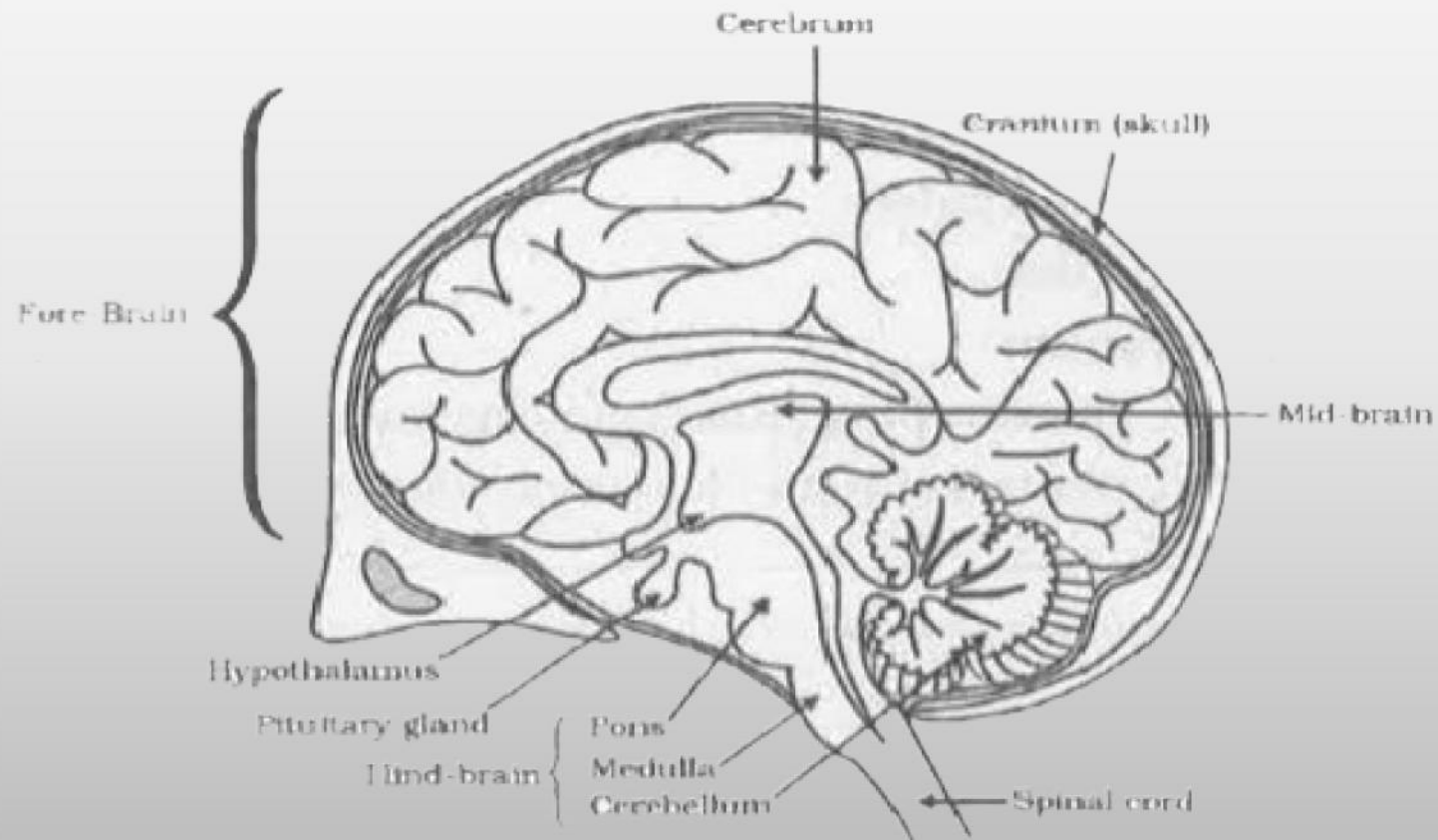
# THE BRAIN



## INTRODUCTION

- The brain is covered and protected by the skull (cranium) and the membranes called meninges: Dura mater, arachnoid mater and the pia mater
- There is a space between the arachnoid mater and pia mater. This is called subarachnoid space which contains cerebrospinal fluid.
- It is divided into three major parts. These are:
  - Fore brain: cerebrum, thalamus and hypothalamus.
  - Mid brain:
  - Hind brain: cerebellum, medulla oblongata and the pons

# STRUCTURE OF THE BRAIN AND ITS PARTS



# FUNCTIONS OF THE PARTS OF THE BRAIN

## Cerebrum:

- This is the largest part of the brain which is divided into two hemispheres i.e. left and right hemisphere
- The left hemisphere receives and sends impulses from and to the left part of the body and the right receives and sends from and to the right part
- Functions include: *learning, memory, reasoning, conscience, intelligence, personality and so on.*
- *It also performs judgements, problem solving, emotions and so on*

## Thalamus:

- This is a small egg like structure within the brain located above the brain stem between the cerebral cortex and the mid brain.
- Its function is to receive the impulses from the sense organs and then transmit them to the other parts of the brain.

## Hypothalamus:

- This is the structure deep inside your brain which links the endocrine and nervous system.
- Its functions include:
  - ❖ *Releasing hormones*
  - ❖ *Regulating body temperature*
  - ❖ *Regulating salts and water in the body*
  - ❖ *Manages sexual behavior*
  - ❖ *Responsible for sleeping*
  - ❖ *Controls appetite*

## Mid brain

- This is the part of CNS located below the cerebral cortex and at the topmost part of brain stem.
- It has three parts i.e. colliculi, tegmentum and cerebral peduncles.
- The function is to
  - *relay audio and visual information*
  - *It is also for neck and head movements.*

## Cerebellum (little brain)

This is located at the back of the head just above and behind where your spinal cord connects to your brain.

Its functions include:

- Balancing of the body during walking
- Its also for posture management
- Eye movements and speech

### **Medulla oblongata**

- This is the hind part which connects the spinal cord to the pones.
- It performs the following
- *It controls heartbeat, blood pressure, breathing rate, coughing and sneezing.*

# GENERAL FUNCTIONS OF THE BRAIN

- It receives impulses from all receptors and sends back impulses to the effectors where a response is put.
- It integrates and coordinates all activities in the body such that the body works efficiently.
- Brain stores information.
- It is involved in cranial reflex actions but it does not initiate them.
- And so many others