

STUDY GUIDE: Parts & Functions of the Brain

Major Divisions of the Brain

Cerebrum

- Largest part of the brain.
- Functions: thinking, planning, judgment, memory, voluntary movement, emotions, sensory interpretation.

Four Lobes of the Cerebrum

Frontal Lobe

- Decision making, reasoning, personality, voluntary movement, speech production.

Parietal Lobe

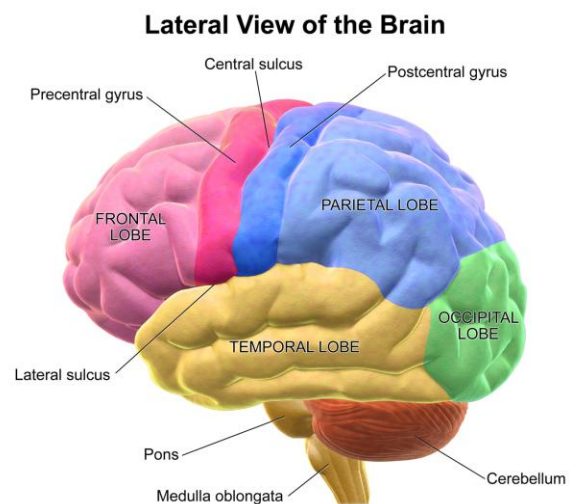
- Touch, temperature, pain, spatial awareness.

Temporal Lobe

- Hearing, language, memory, recognition.

Occipital Lobe

- Vision and visual processing.



Subcortical Structures

Thalamus

- Relay station for sensory information.

Hypothalamus

- Homeostasis, hunger, thirst, sleep, temperature, endocrine control.

Pituitary Gland

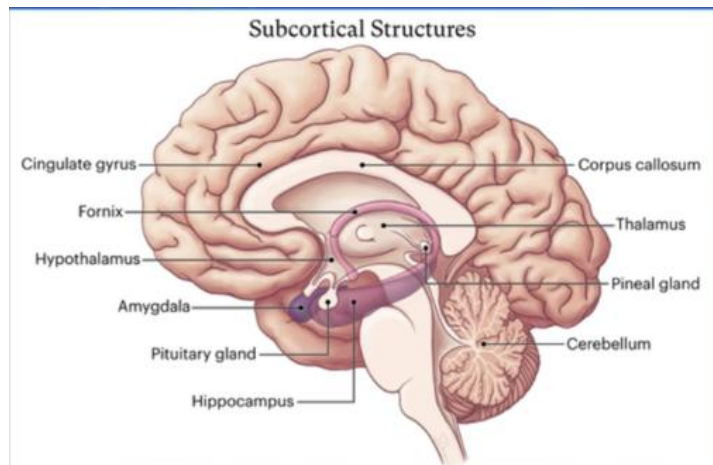
- Master hormone gland.

Hippocampus

- Memory formation and learning.

Amygdala

- Emotion, fear, aggression.



Brainstem

Midbrain

- Reflexes for sight and sound, movement coordination.

Pons

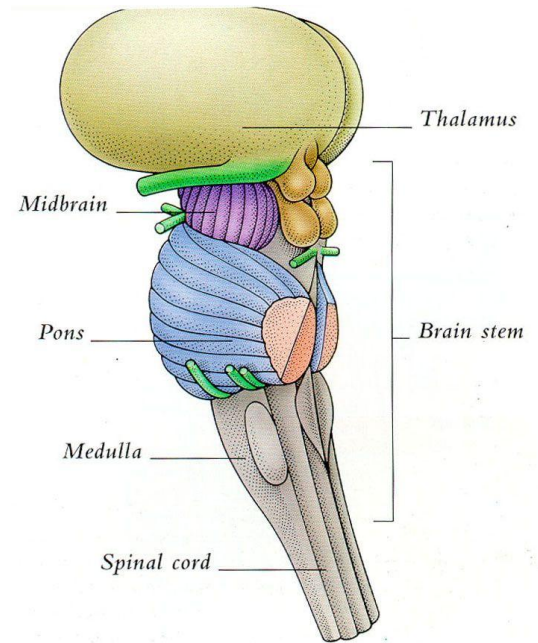
- Sleep, dreaming, breathing rhythm.

Medulla Oblongata

- Heart rate, breathing, blood pressure, survival reflexes.

Cerebellum

- Balance, coordination, motor learning.



Protective Structures

Meninges

- Dura mater, arachnoid mater, pia mater.

Cerebrospinal Fluid (CSF)

- Cushions brain, removes waste, circulates nutrients.

