

↳ Darwin — 'Natural selection'
↳ Kettlewell's study reveals natural selection in action.

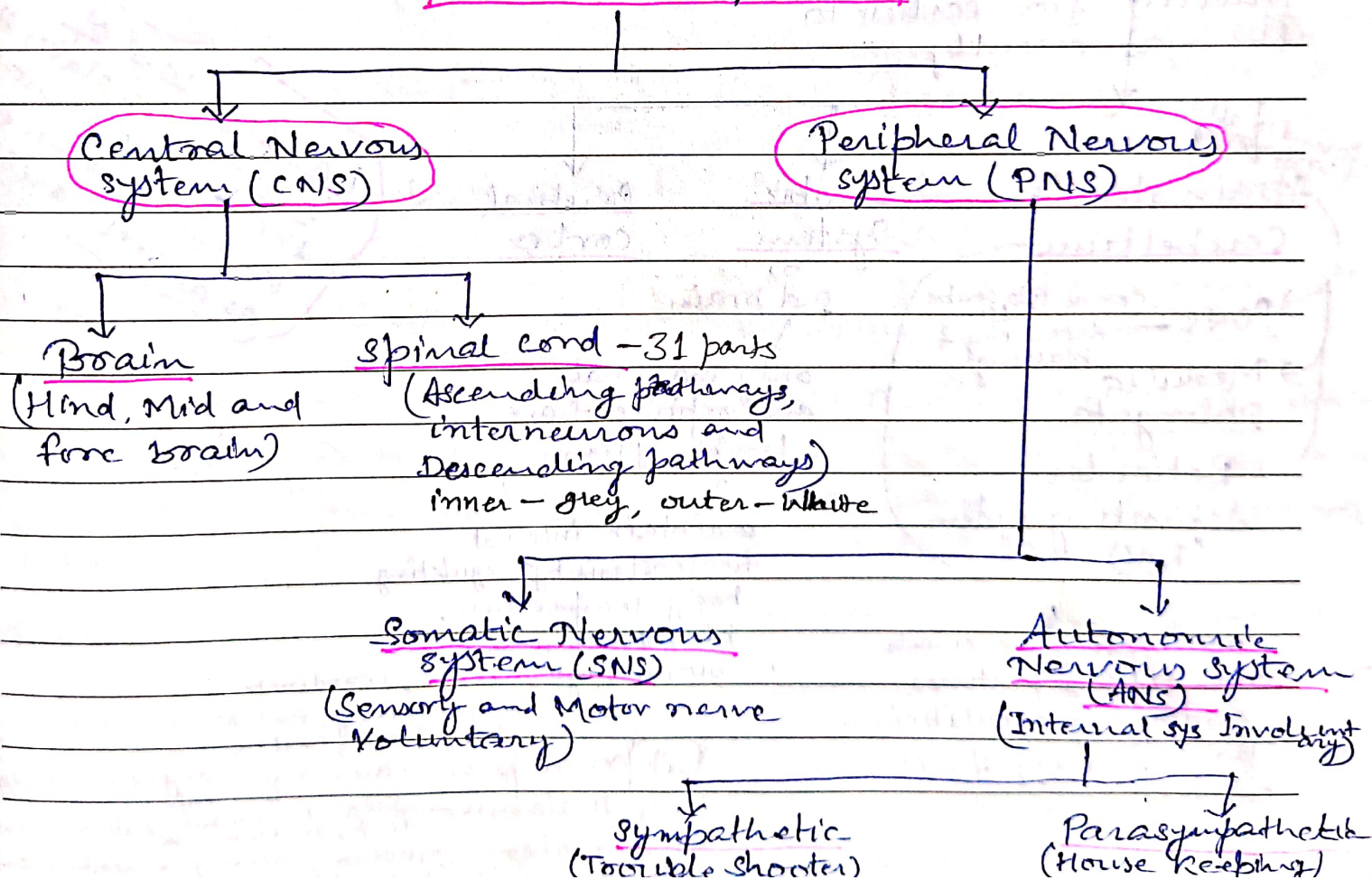
↳ Sociobiology — systematic study of the biological bases of all social behaviour.

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↳ Human beings have 'biograms' from the evolutionary history which programmes their basic forms of social behaviour and social organization.

NERVOUS SYSTEM



↳ Adult brain weight = 1.36 kg
= 100 billion neurons

↳ receives one-fifth of the blood pumped by heart

↳ Neurons in the brain appear grey in colour, so called as grey matter.

↳ Brain — divided into two halves called hemispheres.

— Outer covering called Cortex or Neocortex

Three levels of structure, from earliest to the most recently

found in all vertebrates

Brain stem & Cerebellum

↳ PONS — connects to cerebellum
— dreaming & blinking

↳ Medulla Oblongata

↳ Reticular Activating system (RAS)

coordinating movements
controlling postures,
maintaining equilibrium
stores memory of movement pattern

Limbic System
or
old brain

only mammals and reptiles have limbic system

maintain internal homeostasis by regulating body temperature, blood pressure & blood sugar level, coordinate messages being sent to and from cortex

↳ hippocampus — memory, long term storage of info.

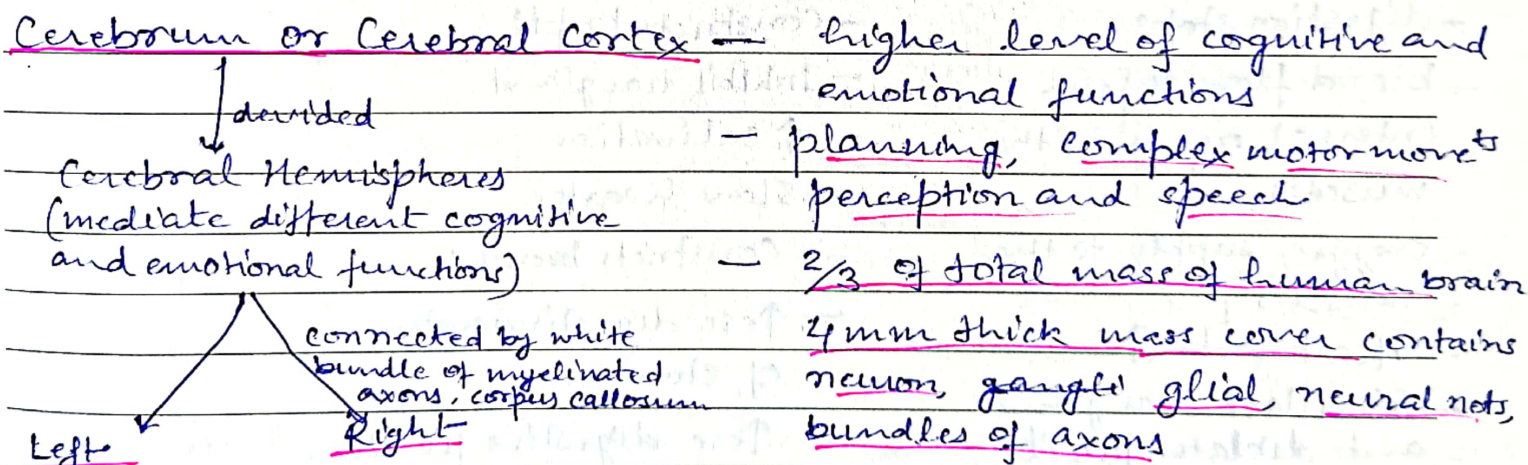
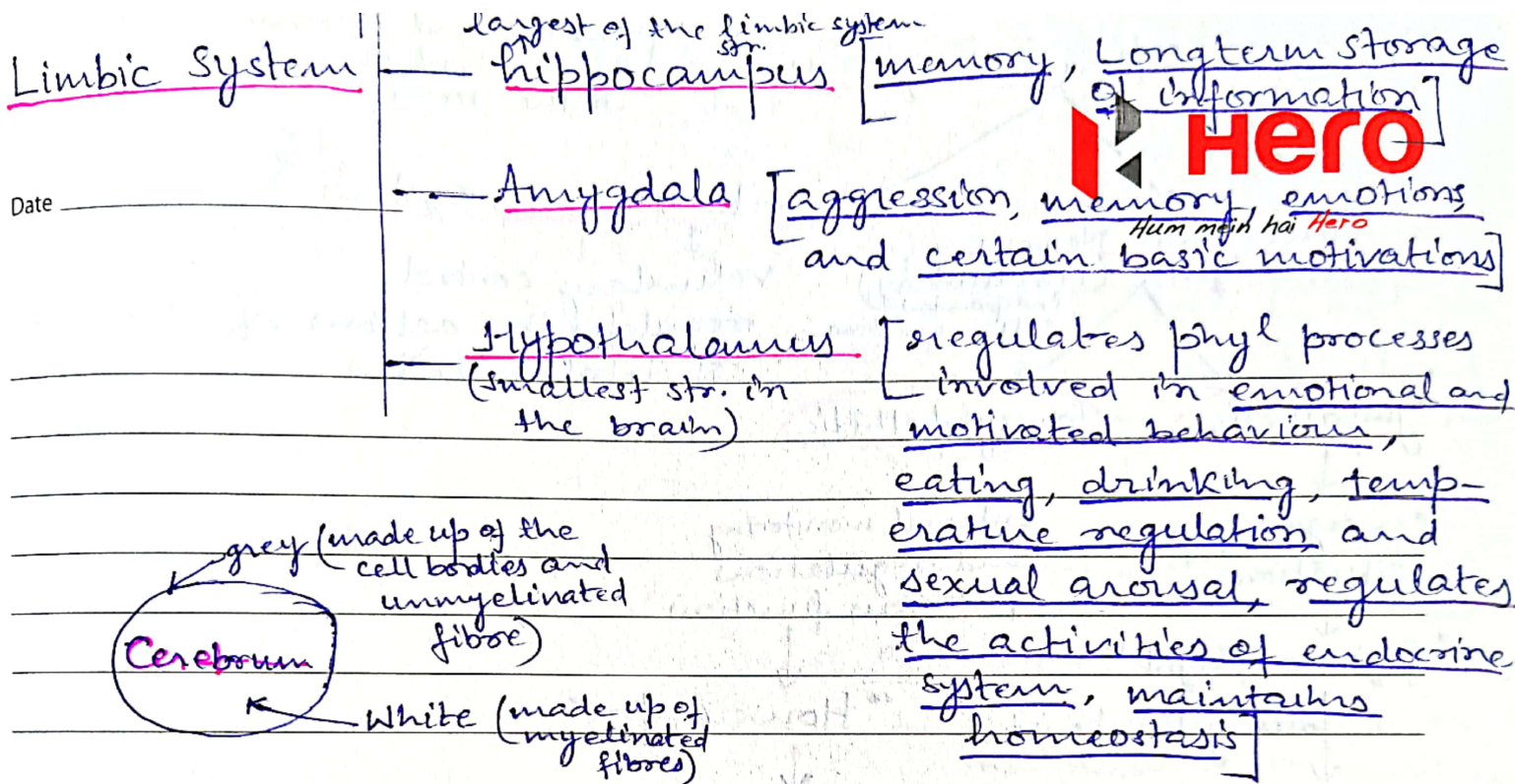
↳ hypothalamus — endocrine, temp. control, motivation, eating, drinking, sex

↳ amygdala — ...

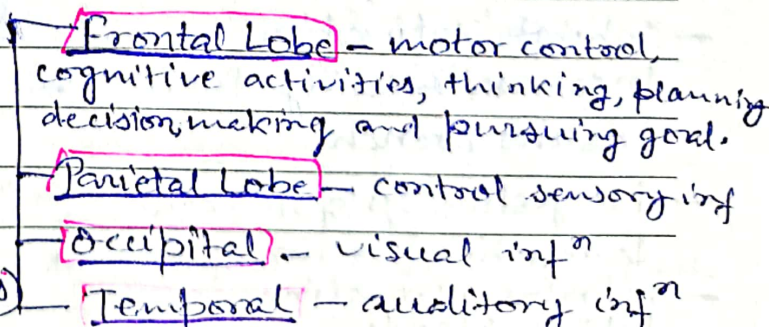
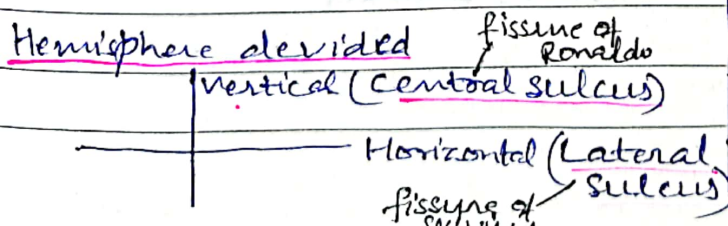
Hero

Hum mein hai Hero

Lashley's law of mass action — states that the cortex functions as whole rather than as discrete areas.



speed



Peripheral Nervous system

[Somatic and Autonomic N.S. are under the control of different structures in the brain]



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Autonomic Nervous system (involuntary, independent, self-regulating)

Somatic Nervous system

voluntary control
regulates the actions of the body's skeletal muscles

Sympathetic

Parasympathetic

emergency situation

internal monitoring and regulations of various functions

"fight or flight"

"House Keeper"

during this period

- digestion stops
- blood flow to form internal organs to the muscles
- oxygen supply to the muscles ↑
- Heart rate ↑
- stimulate tear gland and dilates pupil
- Inhibit salivation
- Increases sweating
- Dilates bronchi
- ↑ digestive sys of stomach
- ↓ digestive function of intestine
- secretes adrenaline
- Inhibits bladder

- constricts pupil
- Inhibit tear gland
- ↑ salivation
- slow heart
- constricts bronchi
- ↑ digestive system of stomach
- ↑ digestive function of intestine
- constricts bladder