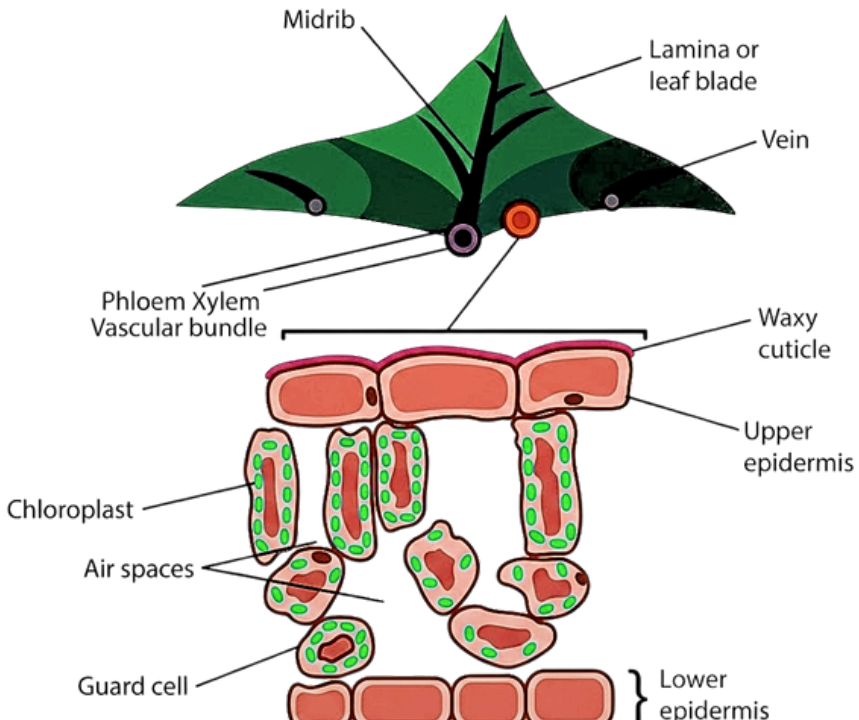
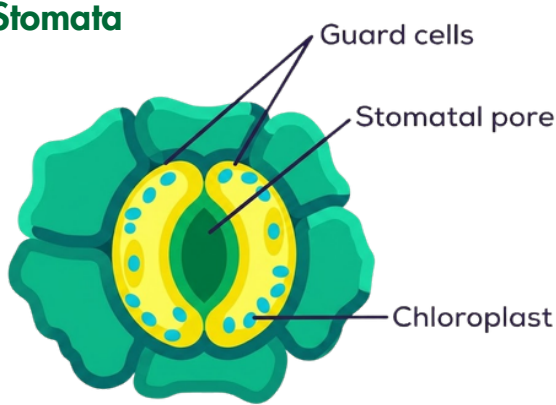
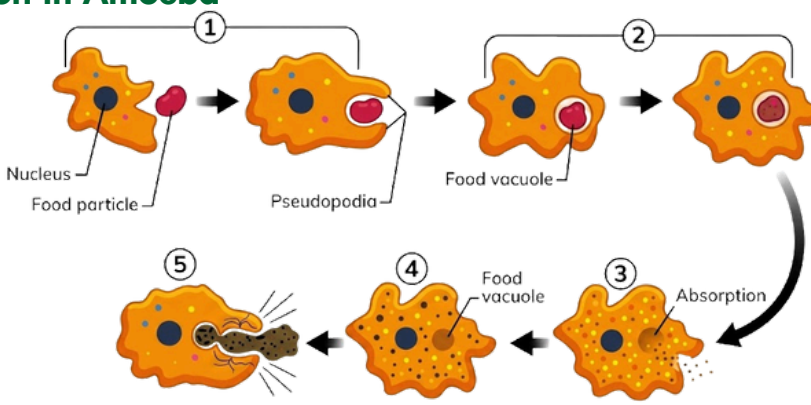


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Science Diagram Cheat Sheet



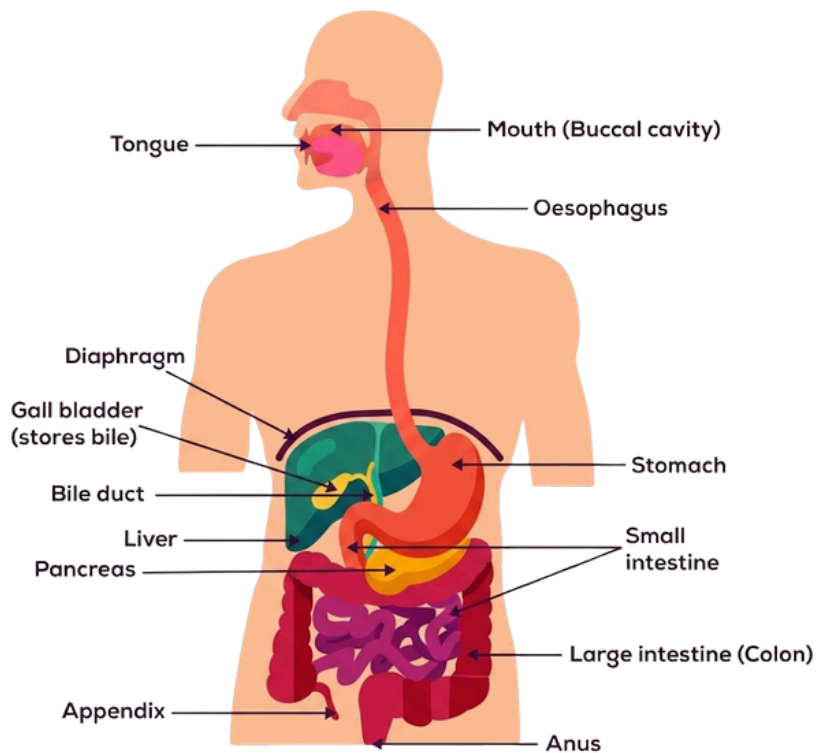
CH : LIFE PROCESSES

| DIAGRAM | FUNCTION |
|---|---|
| <p>Cross-section of a leaf</p>  <p>The diagram illustrates the internal structure of a leaf. At the top, the Midrib and Lamina or leaf blade are shown. A Vein is detailed, containing Phloem and Xylem within a Vascular bundle. The leaf is covered by a Waxy cuticle. The Upper epidermis is the top layer of cells. Below it are Chloroplasts and Air spaces. The Lower epidermis contains Guard cells that form a Stomatal pore.</p> | <ul style="list-style-type: none"> • Waxy Cuticle: Prevents water loss. • Air Spaces: Allows Diffusion of gases. |
| <p>Structure of Stomata</p>  <p>The diagram shows a cross-section of a Stomatal pore formed by two Guard cells. Each guard cell contains Chloroplasts.</p> | <ul style="list-style-type: none"> • Guard Cells: Regulate opening and closing of stomata. • Stomatal Pore: Control Gas exchange. • Chloroplast: Convert light energy into usable energy. |
| <p>Nutrition in Amoeba</p>  <p>The diagram shows the five stages of nutrition in Amoeba: <ol style="list-style-type: none"> 1 Ingestion: Pseudopodia engulf a food particle. 2 Digestion: The food particle is enclosed in a food vacuole. 3 Absorption: Nutrients are absorbed from the food vacuole. 4 Assimilation: The absorbed nutrients are used by the cell. 5 Egestion: Undigested food is expelled from the cell. </p> | <ul style="list-style-type: none"> • Pseudopodia: Engulfs food particles. • Food Vacuole: Helps in digesting the indigested food. |

DIAGRAM

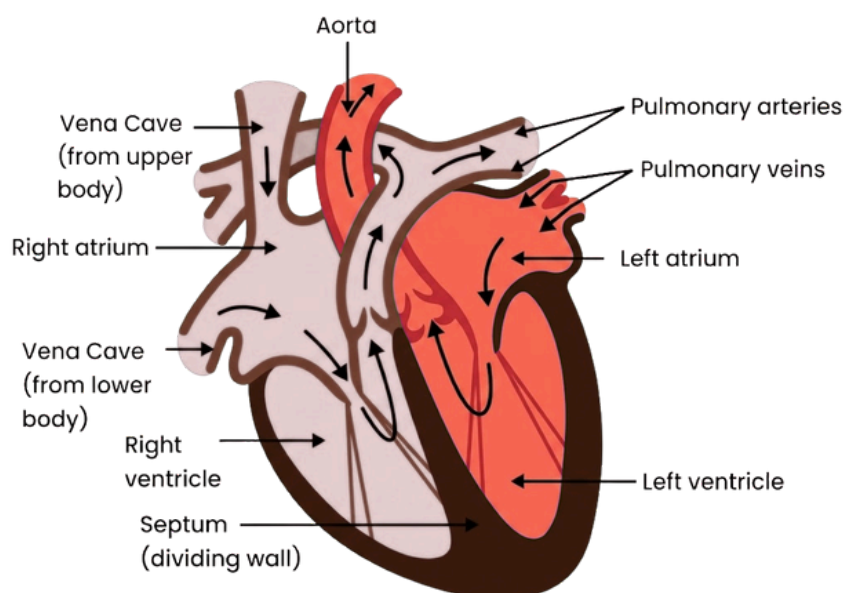
FUNCTION

Digestive System



- **Mouth:** Salivary glands release saliva which converts starch into maltose.
- **Stomach:** Secretes HCl and converts pepsinogen to pepsin.
- **Small Intestine:** Digestion completes here; breaks proteins into amino acids, carbs into glucose, and fats into fatty acid and glycerol.
- **Large Intestine:** Absorb salt and water.
- **Liver:** Secretes Bile to emulsify fat globules.
- **Pancreas:** Secretes Trypsin and Lipase.

Human Heart (Circulatory System)

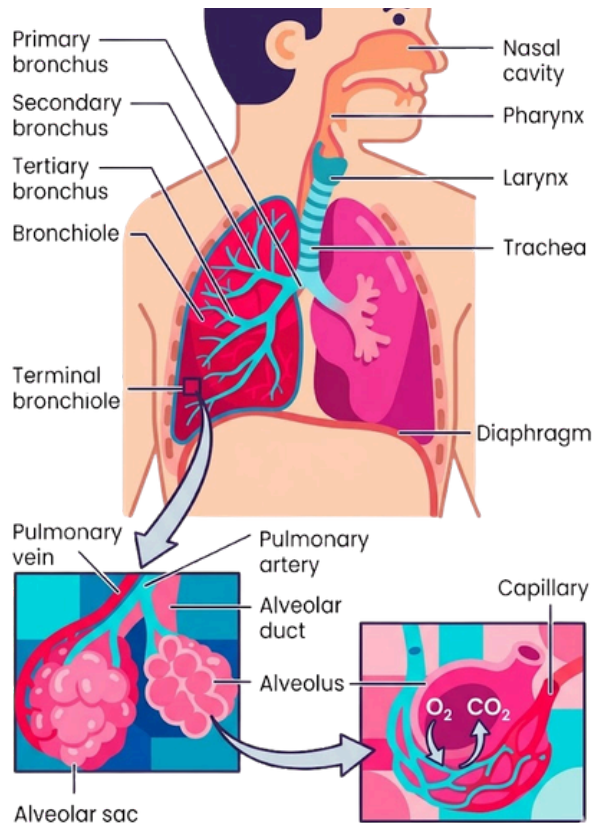


- **Aorta:** Carry oxygenated blood from heart to body.
- **Pulmonary Arteries:** Carry de-oxygenated blood from heart to lungs.
- **Pulmonary Veins:** Carry oxygenated blood from lungs to heart.
- **Left Atrium & Ventricle:** Receives oxygenated blood from lungs and sends it to the Aorta.
- **Right Atrium & Ventricle:** Receives de-oxygenated blood from the body.
- **Septum:** Separates oxygenated and de-oxygenated blood.
- **Vena Cava:** Carry de-oxygenated blood from body to heart.

DIAGRAM

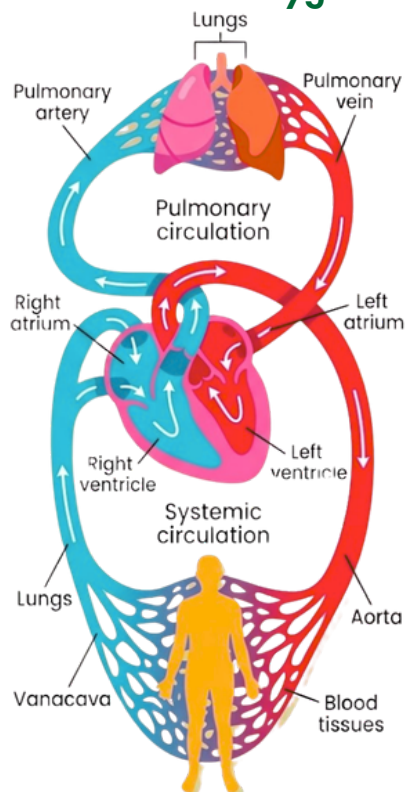
FUNCTION

Human Respiratory System



- **Trachea:** Produces mucus; also known as the wind pipe.
- **Rings of Cartilage:** Prevents the wall of trachea from collapsing.
- **Diaphragm:** Changes shape to help the thoracic cavity expand (inhale) and contract (exhale).
- **Alveoli:** Exchange Oxygen and Carbon dioxide in the blood stream.
- **Larynx:** Voice box.
- **Pharynx:** Junction of food and wind pipe.

Transportation of blood and oxygen

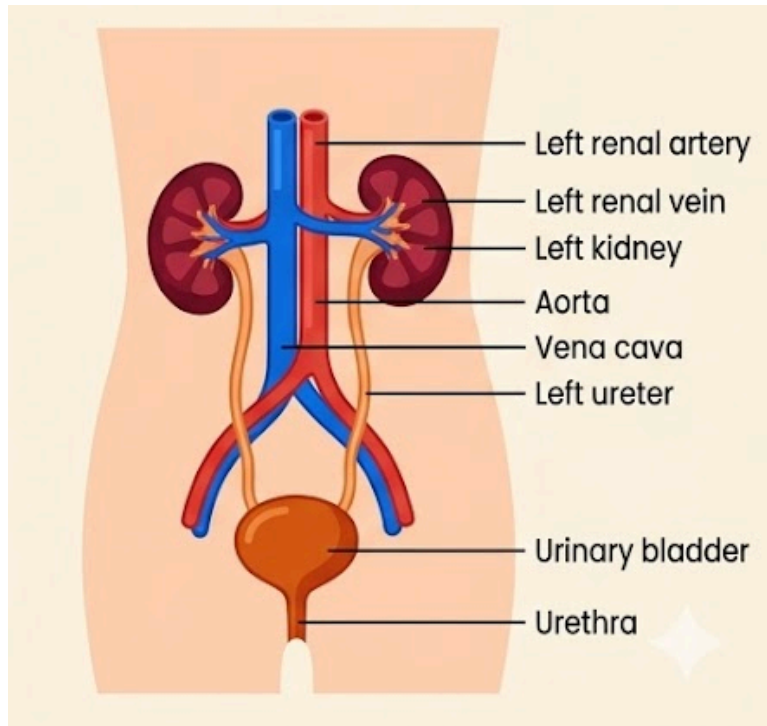


- **Pulmonary Vein:** Receives oxygenated blood
- **Pulmonary artery:** Sends deoxygenated blood
- **Artery:** Carry oxygenated blood
- **Vein:** Carry deoxygenated blood

DIAGRAM

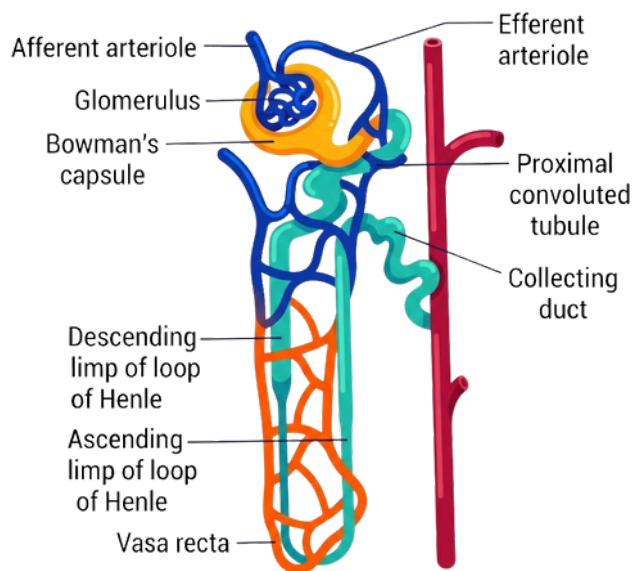
FUNCTION

Human Excretory System



- **Left Kidney:** Remove waste and extra fluid
- **Left Ureter:** Urine passes through towards ureter
- **Urinary bladder:** Store Urinary Urine and empty under neuromuscular Control
- **Urethra:** Allows urine to pass outside the body

Structure of a Nephron



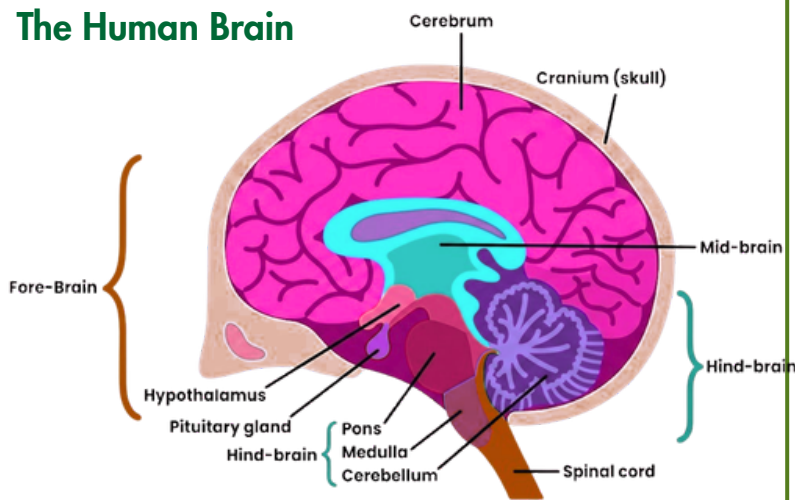
- **Glomerulus:** Filter the blood.
- **Tubular Part:** Reabsorption of nutrients from filtrate.
- **Collecting Duct:** Collects final urine and passes it to the ureter.
- **Bowman's Capsule:** Collects blood to filter.
- **Left Kidney:** Remove waste and extra fluid.
- **Urinary Bladder:** Store urine and empty under neuromuscular control.
- **Urethra:** Allows urine to pass outside the body.
-

CH: CONTROL AND COORDINATION

DIAGRAM

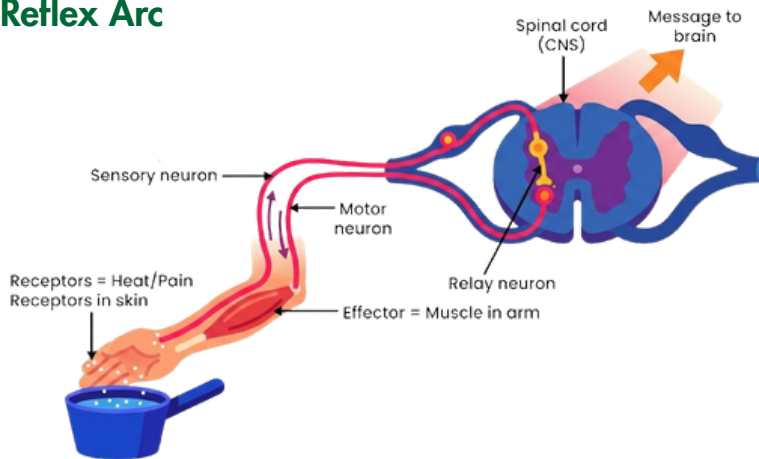
FUNCTION

The Human Brain



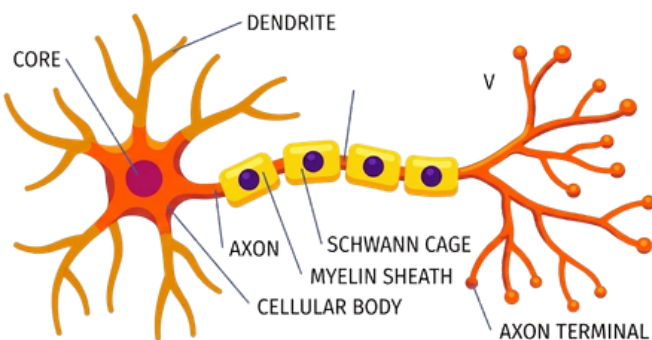
- **Forebrain:** Controls reproductive functions, body temperature, emotions, hunger, and sleep.
- **Cerebrum:** Responsible for thinking, intelligence, consciousness, and memory.
- **Mid-brain:** Connects forebrain and hindbrain.
- **Hindbrain (Pons, Medulla, Cerebellum):** Coordinates survival processes like breathing, heartbeat, sleep, and motor learning.
- **Pituitary Gland:** Regulates bodily functions and growth through hormones.

Reflex Arc



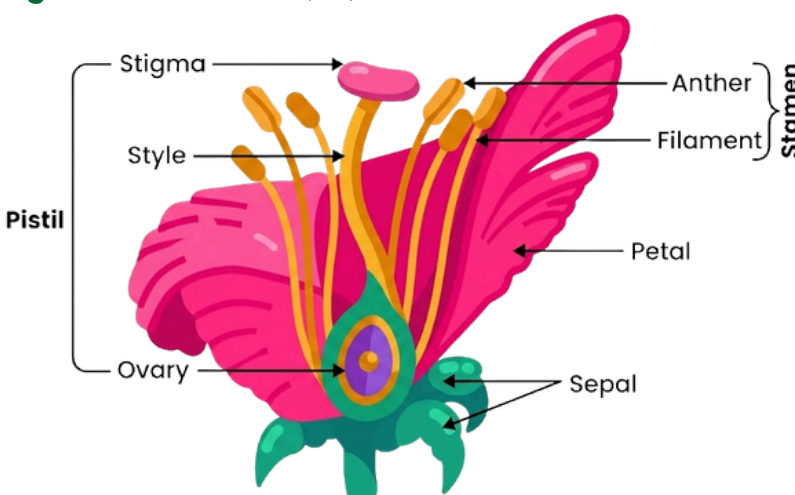
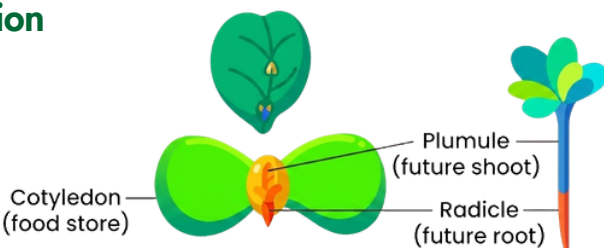
- **Sensory neuron :** Carry signal to the brain
- **Motor neuron :** Acquires Information
- **Relay neuron:** Allows sensory & motor nerves to communicate

Structure of a Neuron



- **Axon:** Information travels as an electric impulse
- **Dendrite :** Acquires Information
- **Nerve ending :** impulse gets converted into a chemical signal

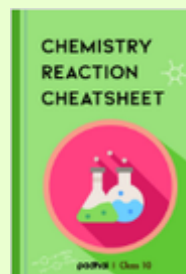
CH: HOW DO ORGANISMS REPRODUCE

| DIAGRAM | FUNCTION |
|---|---|
| <p>Longitudinal Section (LS) of a Flower</p>  | <ul style="list-style-type: none"> • Pistil: Contains ovules and each ovule has an egg cell (female part of the flower) • Stamen : Produces pollen grains (male part of the flower) |
| <p>Germination</p>  | <p>—</p> |

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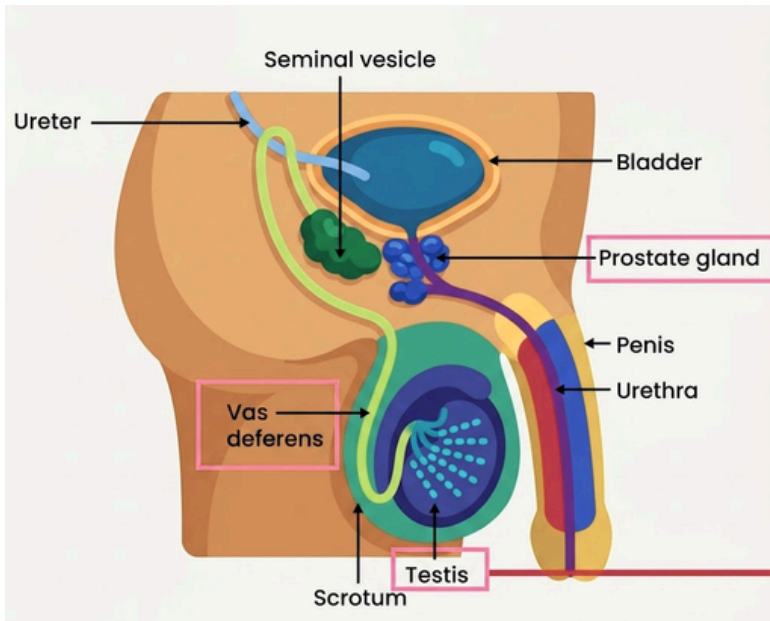


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DIAGRAM

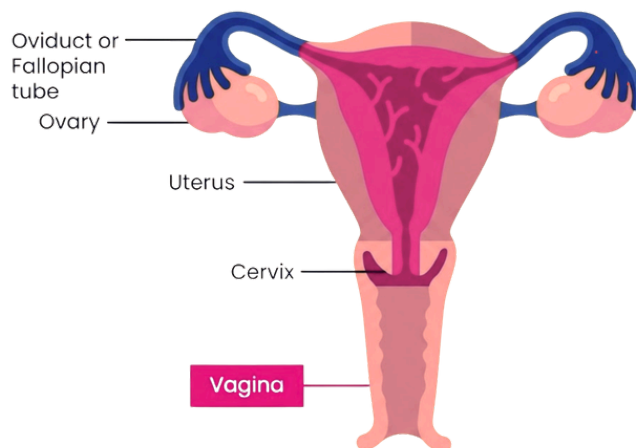
FUNCTION

Male Reproductive System



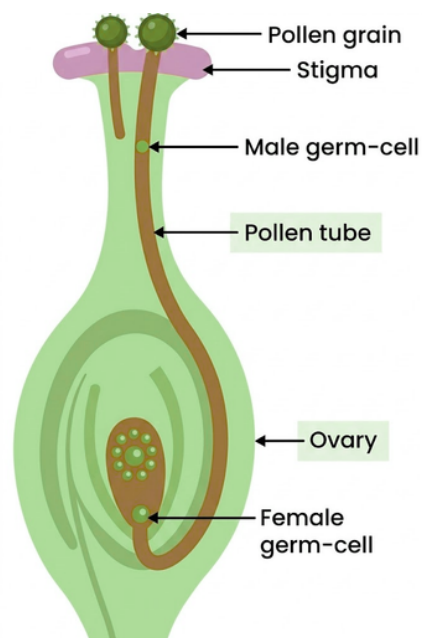
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- **Urethra:** Allows urine to pass outside the body.

Female Reproductive System



- **Oviduct or Fallopian tube :** Passage of eggs of travel from ovary to uterus
- **Ovary :** Contains immature eggs
- **Vagina :** Passage through which sperms enter during intercourse

Germination of pollen on stigma



- **Pollen Tube:** Allows the passage of pollens from germ cell
- **Ovary :** Prepare ovules & protect developing zygote

Thankyou for Learning with **padhai**

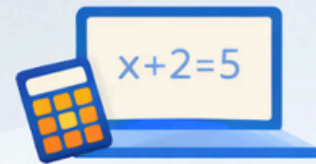
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