

The Four Features of Chordates

Unpacking the fundamental biological blueprint of Phylum Chordata.

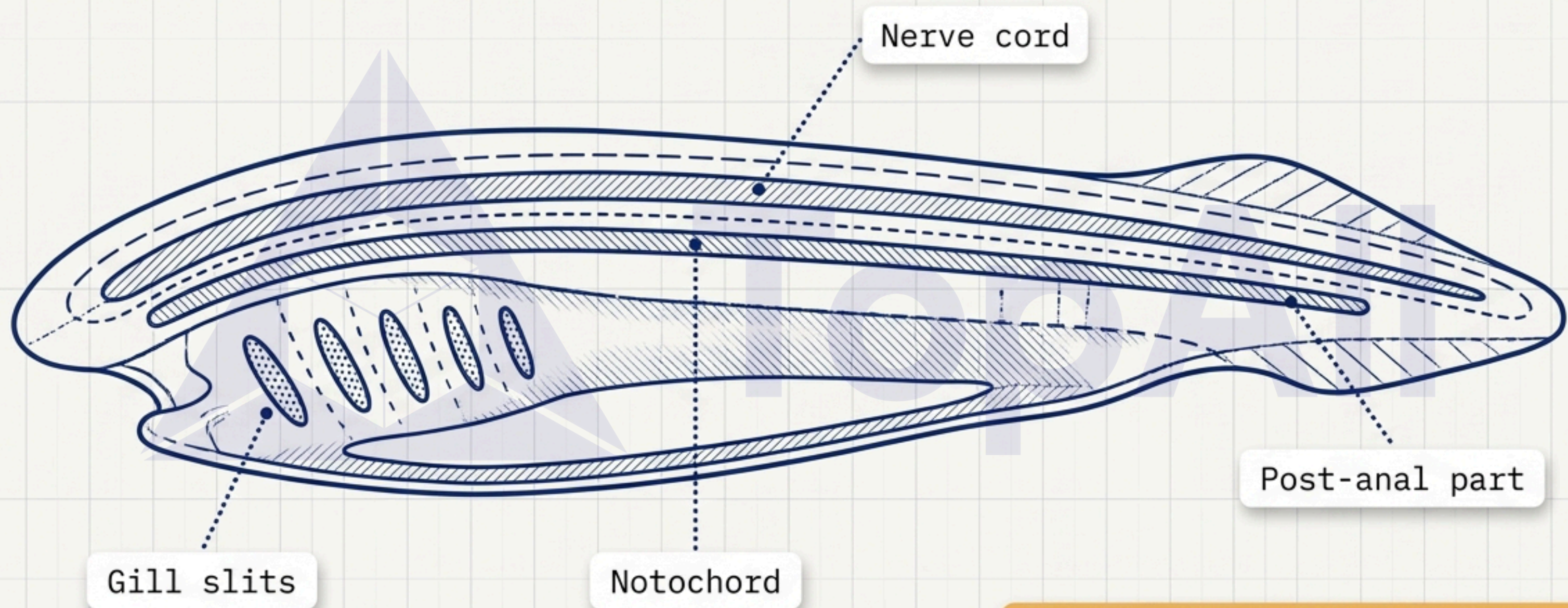
Phylum:
Chordata

Level:
Organ-System

Symmetry:
Bilateral

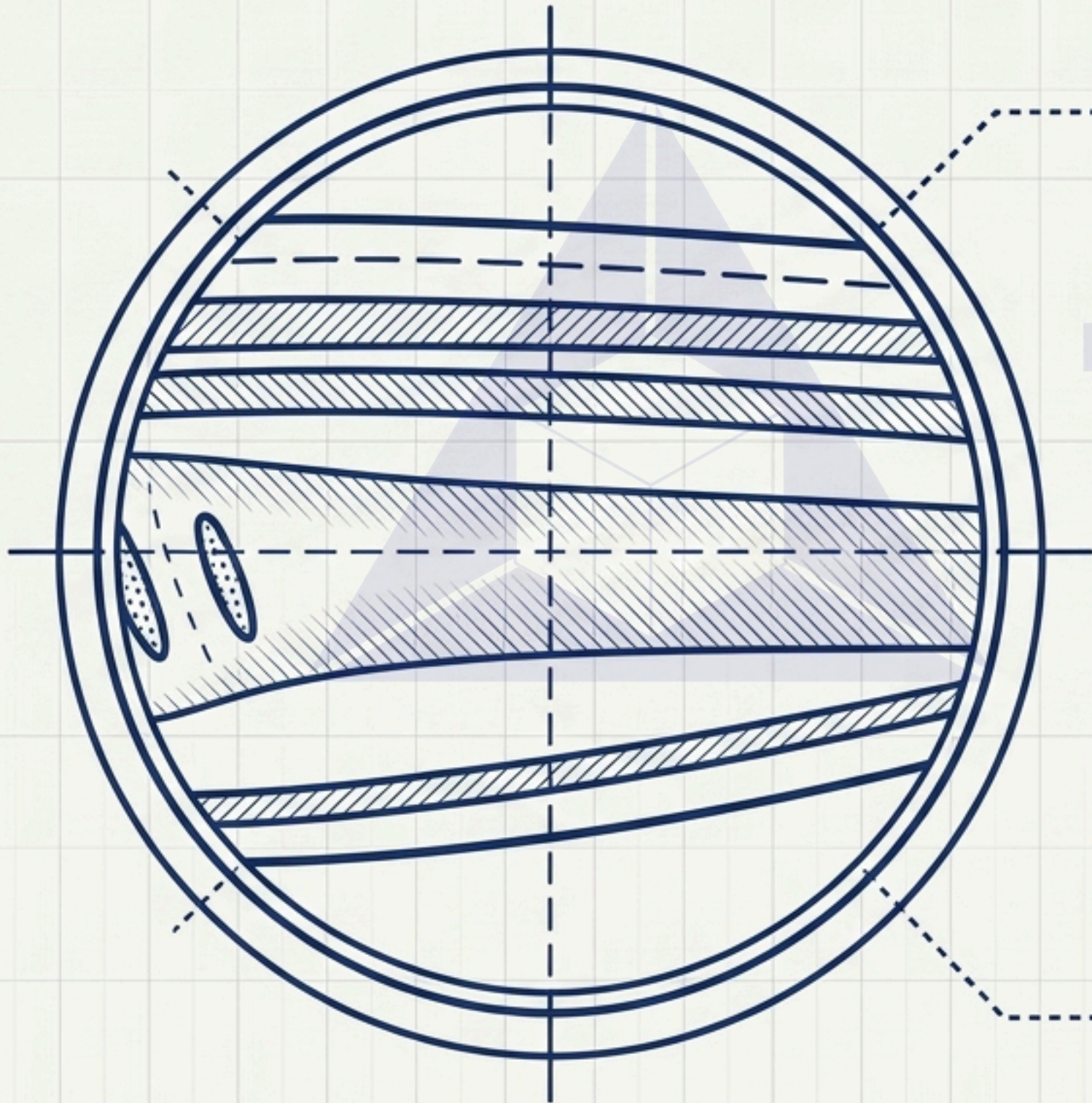


The Chordate Body Plan



Note: These fundamental features are present in all chordates during at least one stage of their embryonic or adult life.

1. Notochord



Core Concept

A mesodermally derived, rod-like structure formed on the dorsal side during embryonic development.

Key Functions

- Provides skeletal support and axial rigidity.
- Acts as the primary defining feature of the phylum.

Embryonic Origin: Mesoderm



You've Learned the Theory. Let's Test Them Now.

$$E=mc^2$$



Turn theory into marks with **unlimited MCQs, smart analysis, and focused revision.**

Practice Now



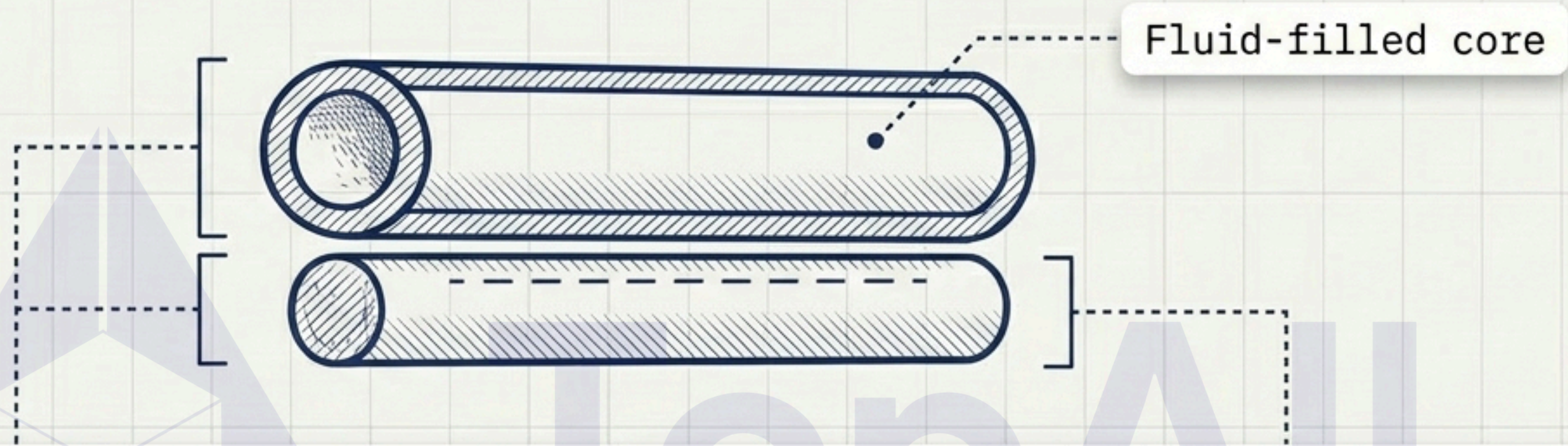
At prep.topall.app

Key Highlights

- » Free Study Material, Videos & Infographics
- » Push Your Limits with Level-Based Challenges
- » Climb the Leaderboard Among Fellow Aspirants
- » Practice Unlimited MCQs for NEET & JEE
- » Get Clear Explanations, Not Just Marks
- » Track Your Performance Smarter



2. Dorsal Hollow Nerve Cord



Core Concept

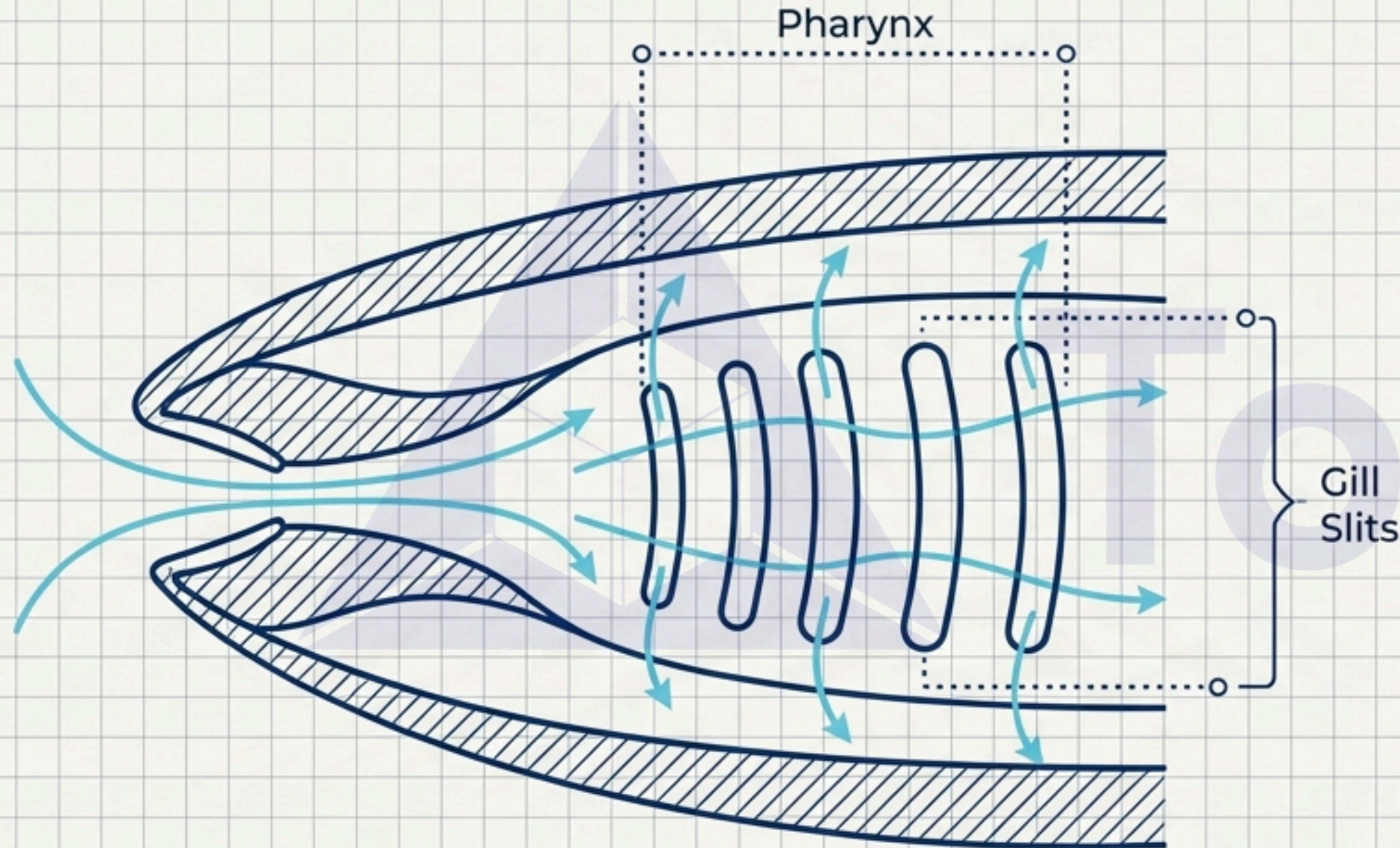
A single, hollow, fluid-filled tube located dorsally to the notochord.

Key Functions

- Develops into the central nervous system (CNS).
- Forms the brain (anteriorly) and spinal cord.

Evolutionary distinction: Unlike non-chordates, which typically possess a ventral, solid, and double nerve cord.

3. Paired Pharyngeal Gill Slits



Core Concept

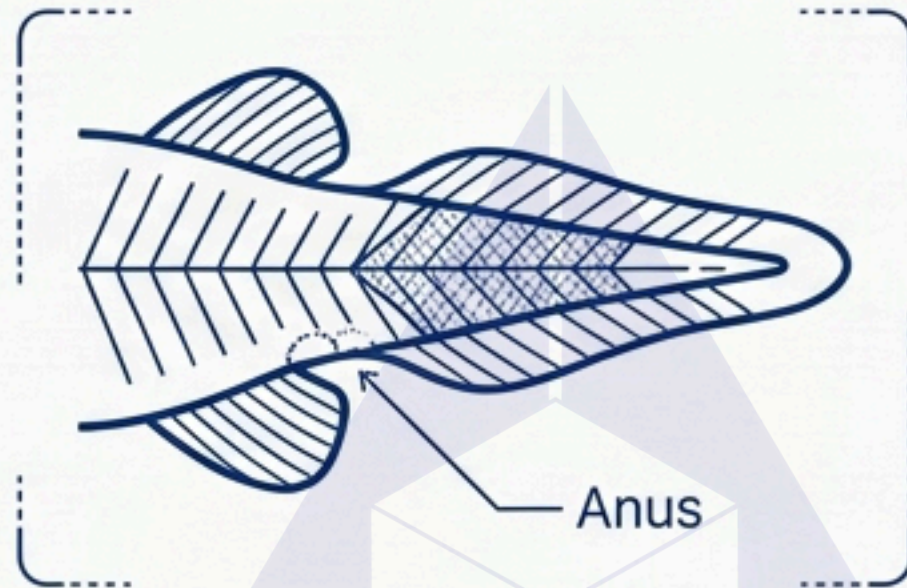
A series of openings that perforate the pharynx, connecting the throat to the outside environment.

Key Functions

- Allow for the exit of water that enters the mouth during feeding.
- Function as filter-feeding organs in primitive chordates.
- Modified for respiration (gills) in aquatic vertebrates.

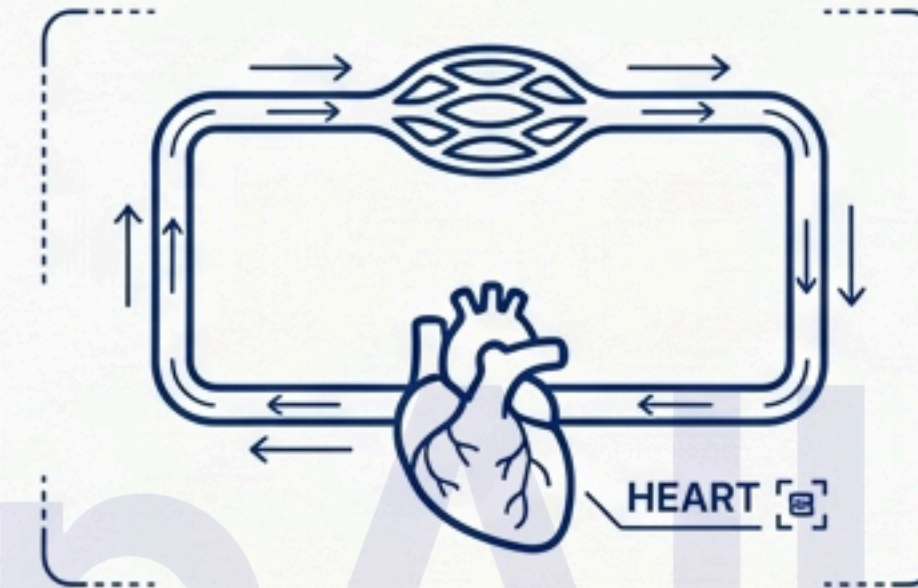
Anatomical Location: Pharynx

4. Post-anal Tail & Circulation



Post-Anal Tail

- A posterior elongation of the body extending beyond the anus.
- Contains skeletal elements and muscles.
- Provides primary propulsion for aquatic species.



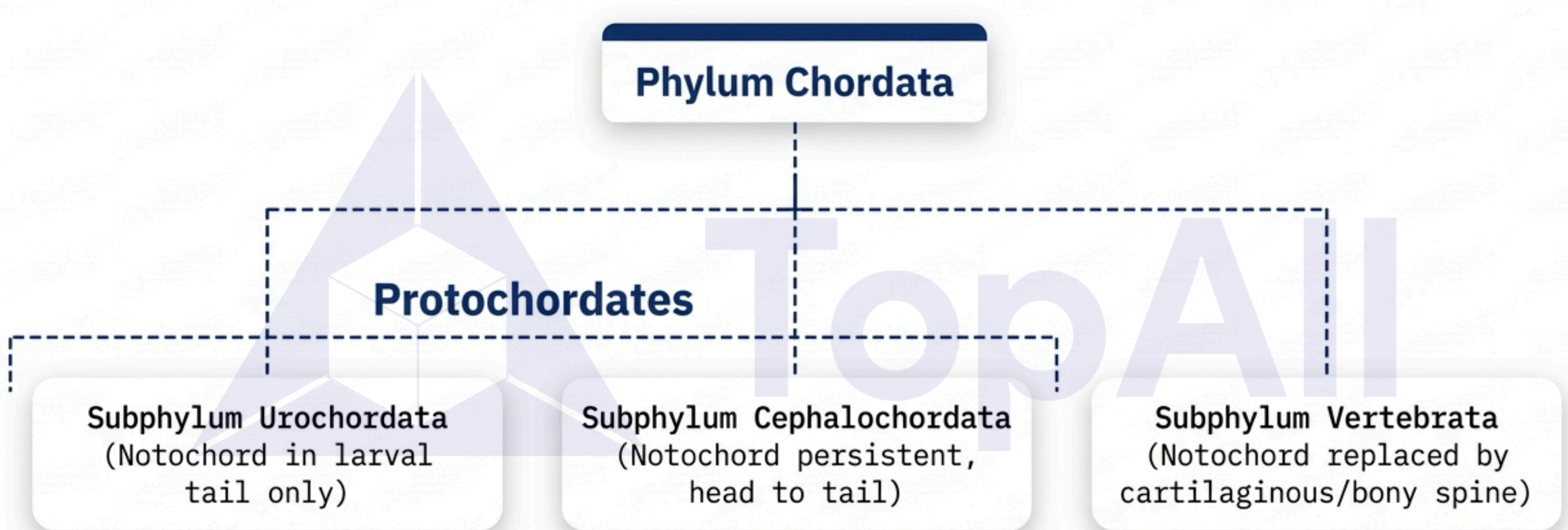
Closed Circulatory System

- Blood is strictly confined to a continuous series of vessels (arteries, veins, capillaries).
- Driven by a ventral, muscular heart.
- Allows for highly efficient nutrient and oxygen transport.

Chordates vs. Non-Chordates

Feature	Chordates	Non-Chordates
Notochord	✓ Present	✗ Absent
Central Nervous System	Dorsal, hollow, and single	Ventral, solid, and double
Pharynx	Perforated by gill slits	Gill slits are absent
Heart	Ventral	Dorsal (if present)
Post-anal part	Tail is present	Post-anal tail is absent

The Taxonomic Reality



All vertebrates are chordates, but not all chordates are vertebrates.
(Protochordates possess the fundamental chordate features without ever developing a vertebral column).



You've Learned the Theory.

Now Let's Test It.

Reading notes gets you knowledge.

Practicing MCQs gets you marks.

That's exactly what TopAll Pro is built for.

Try TopAll Pro Now

What TopAll Pro Does Differently

-  **Stuck? Snap it. Solve it. — Doubts AI**
Photo → step-by-step solution in seconds, 24/7
-  **Your AI Coach finds your blind spots**
Concept-level weakness detection — not just chapter-level
-  **4.5 Lakh+ questions. Never run out.**
13× more content than any other prep app in India
-  **Build your own test in 60 seconds**
Pick a chapter, set difficulty — AI does the rest instantly.
-  **AI Recommendation that helps you improve**
AI Recommendation Analysis your Tests and tell you where you need to improve.



Practice the moment you finish studying
Jump in while the concept is still fresh in your head

4.5L+
MCQs

1.5L+
Students

AI Powered
In-Depth Analysis