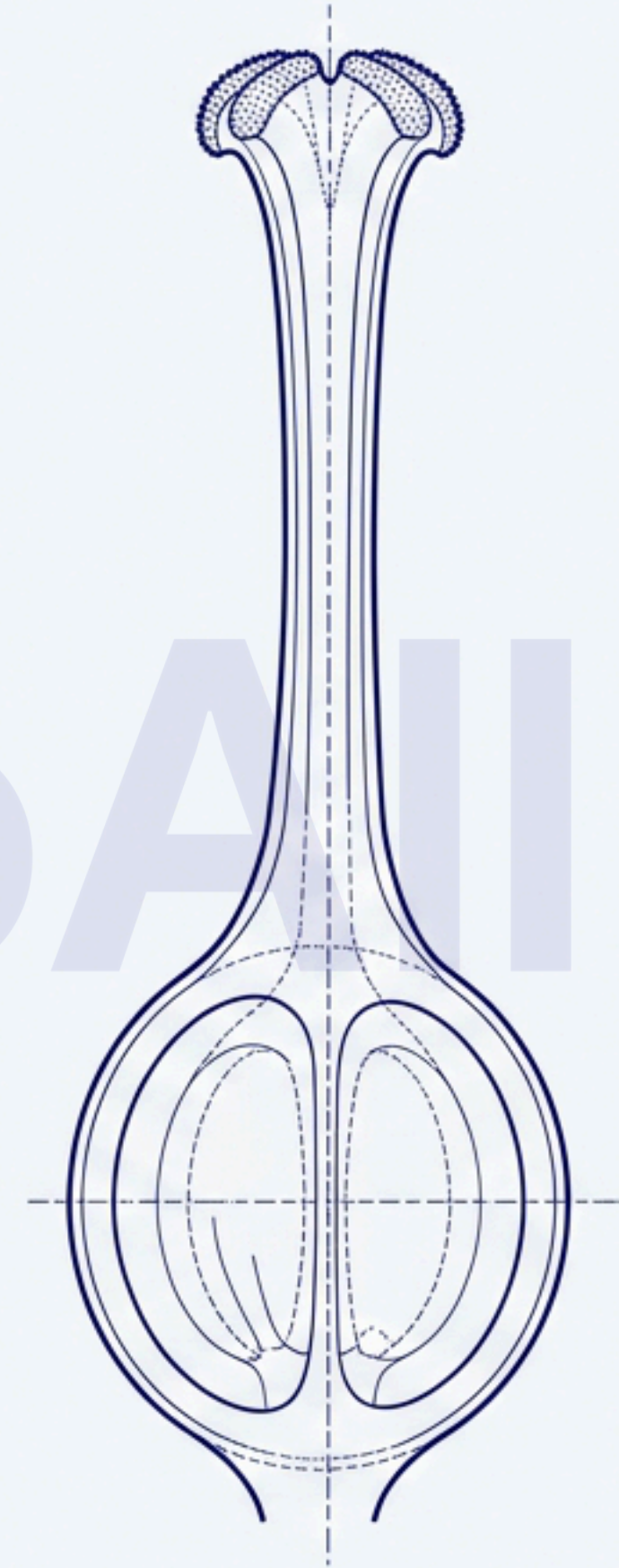


SECTION 5.5.1.4

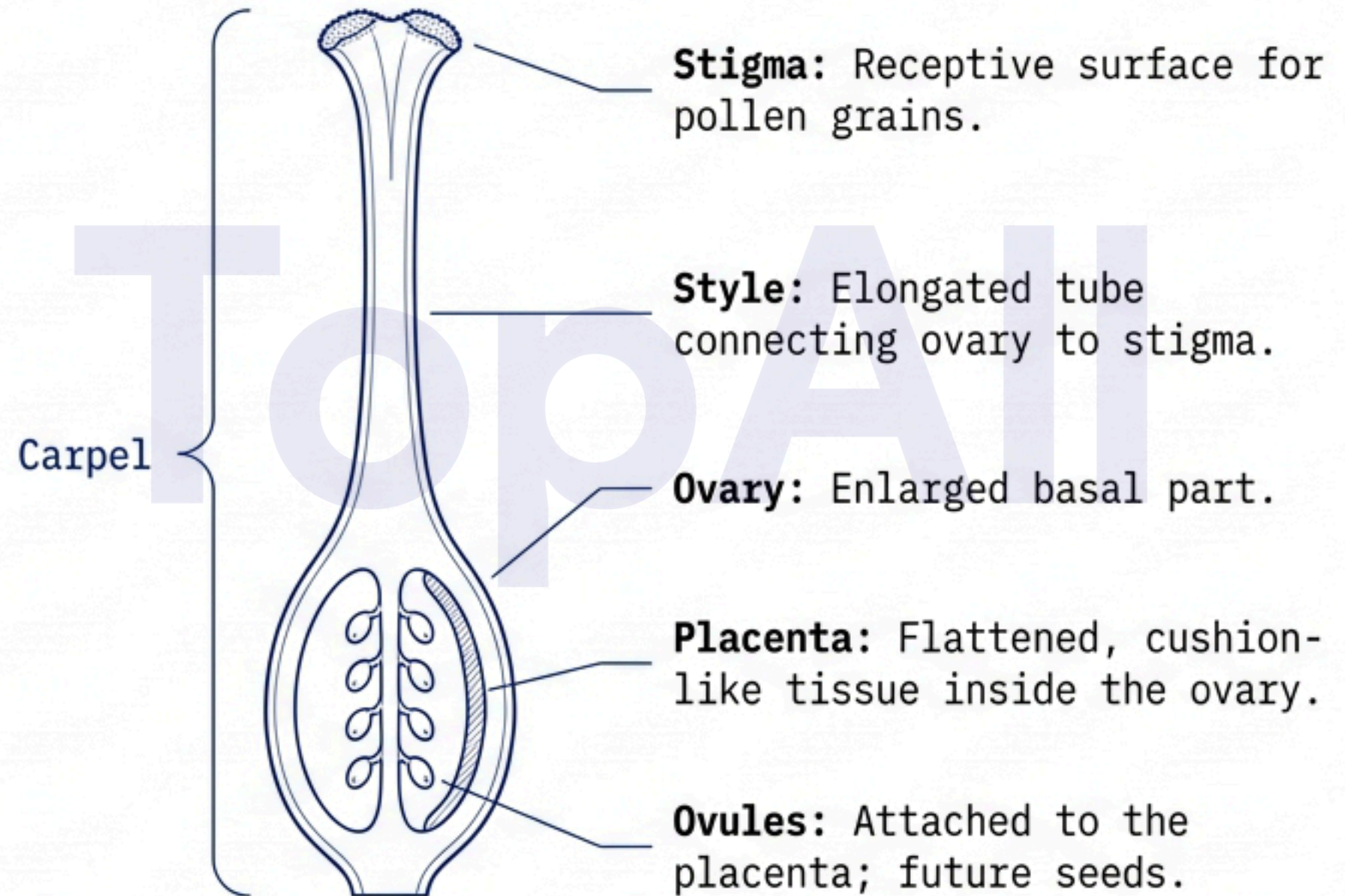
Where Ovules Are Arranged

A structural guide to the Gynoecium and Placentation in flowering plants.



The Female Reproductive Core

The gynoecium is made of one or more carpels. Each carpel is constructed of three primary structural components, housing the ovules on a specialized internal cushion.



Carpel Configuration

When a flower possesses more than one carpel, their physical arrangement defines the overarching gynoecium type.

APOCARPOUS

Carpels remain completely free and independent.

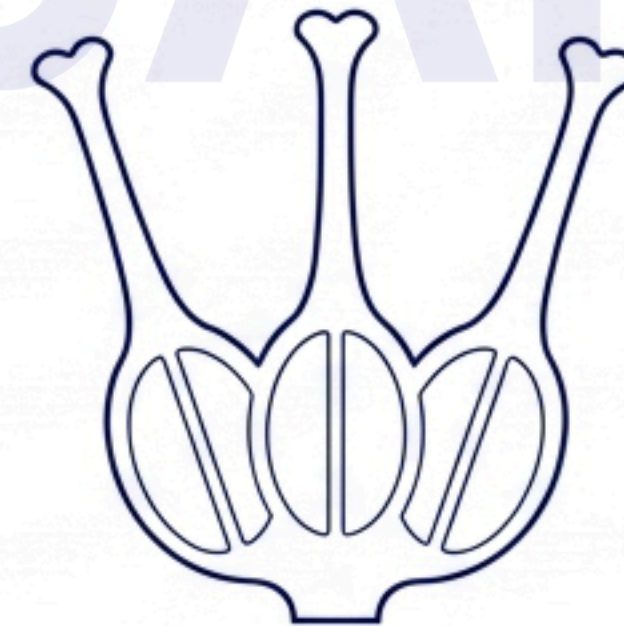
Lotus, Rose



SYNCARPOUS

Carpels are fused together into a single, unified structure.

Mustard, Tomato





**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

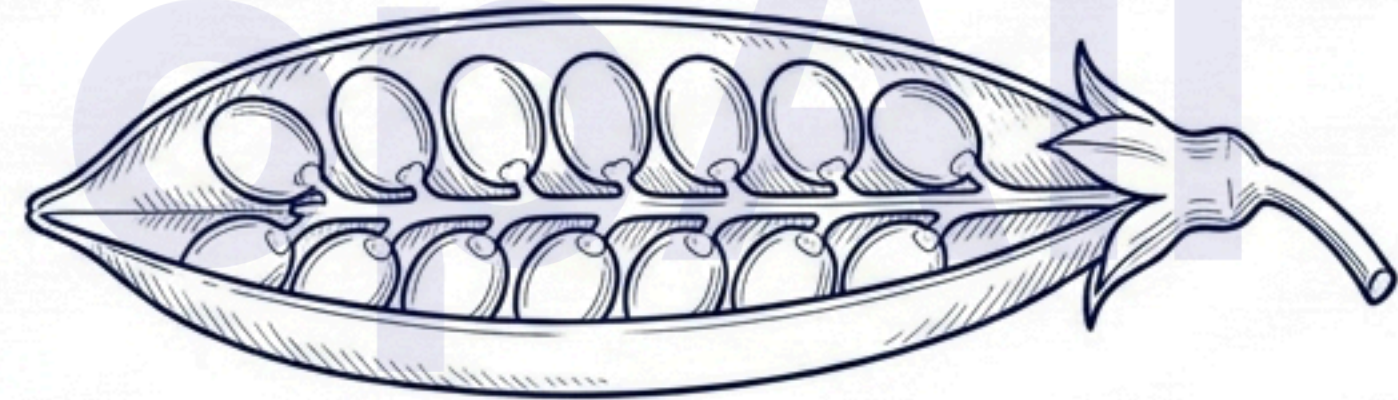


Defining Placentation

Placentation is the specific arrangement of ovules within the ovary. The architecture varies distinctly across plant families.

Marginal Placentation

The placenta forms a distinct ridge along the ventral suture of the ovary. Ovules are borne on this ridge, typically forming two separate rows.

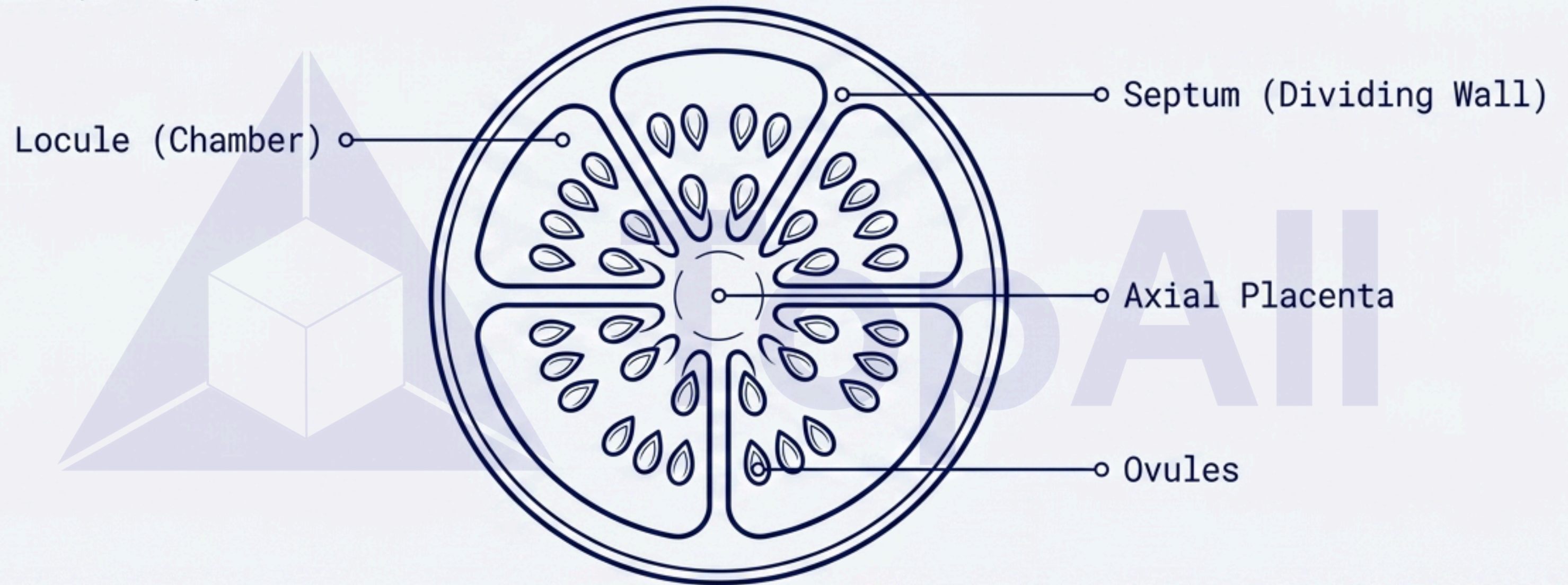


Example: Pea

Note: Ovules line up strictly along the seam (suture) of the ovary wall.

Axile Placentation

Ovules are attached to a central axial placenta within a multi-chambered (multilocular) ovary.



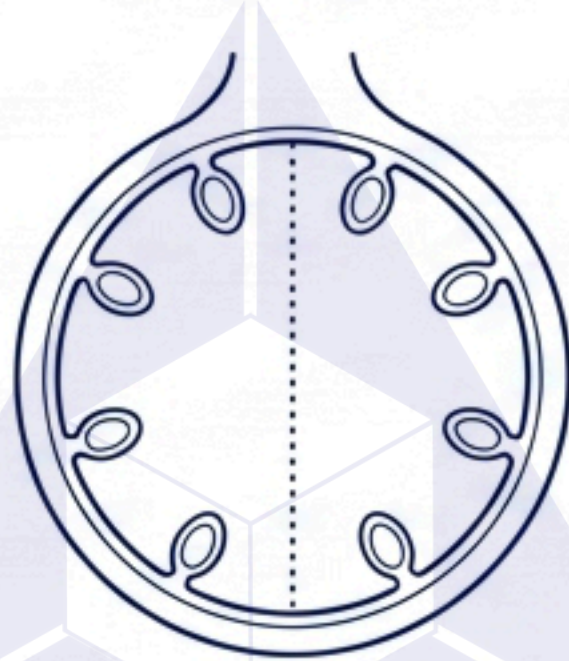
Structure: Multilocular
(multiple chambers)

Attachment: Central Axis

Examples:
China rose, Tomato, Lemon

Peripheral vs. Central Attachment

Parietal

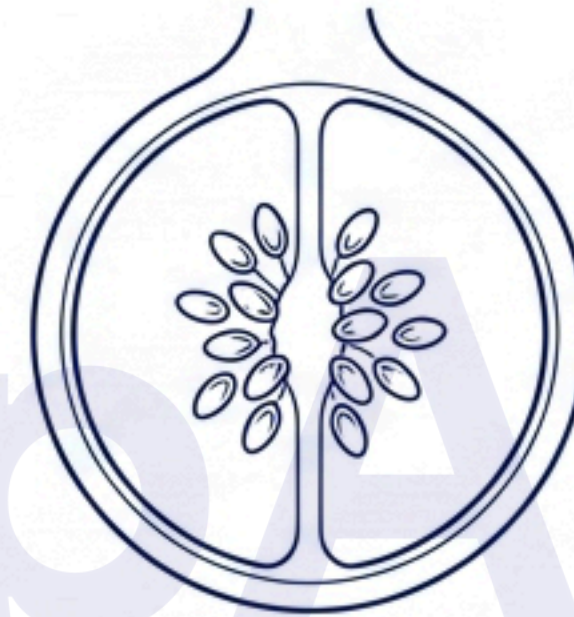


Ovules develop on the inner wall or peripheral part.

Starts as one-chambered, but becomes two-chambered due to the formation of a false septum.

Mustard, Argemone

Free Central

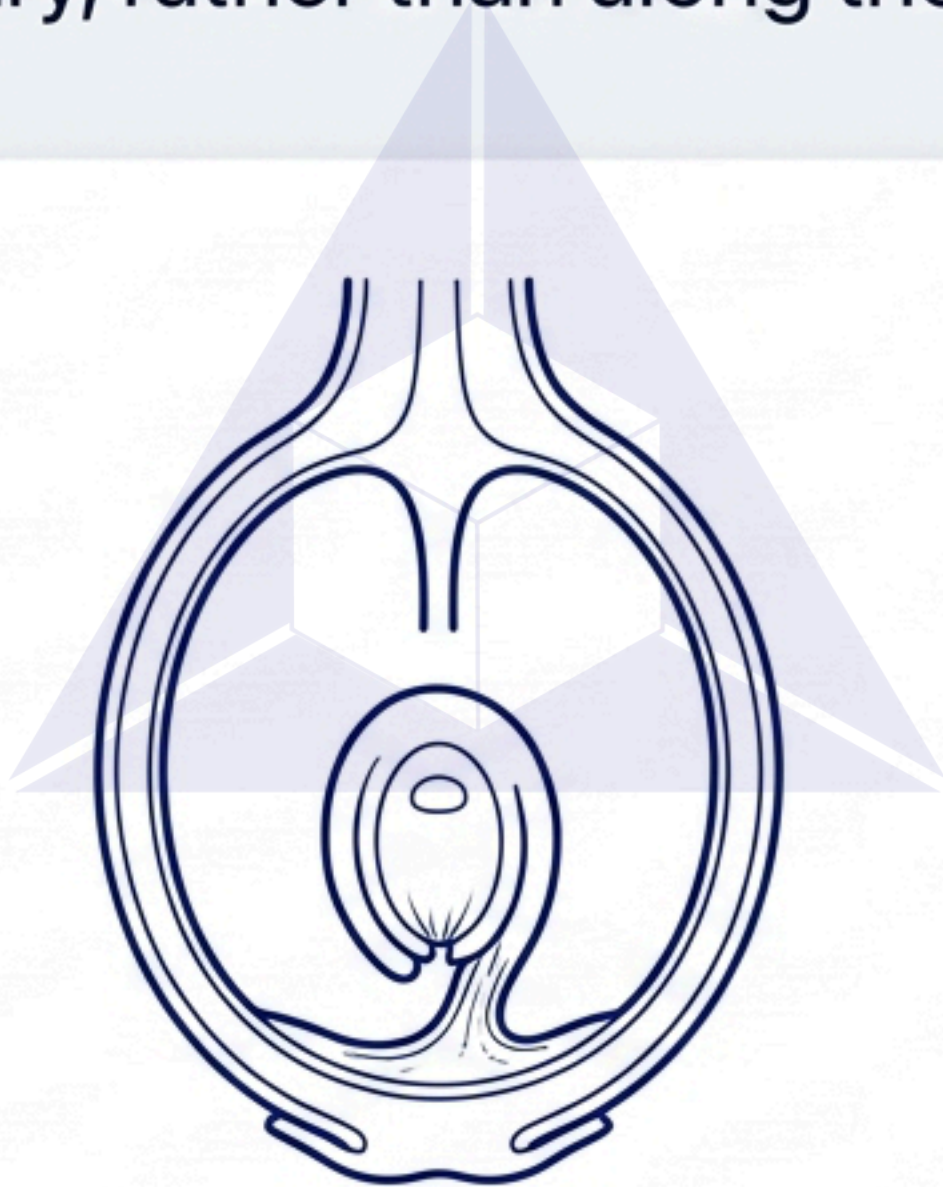


Ovules are borne directly on the central axis. Septa are completely absent.

Dianthus, Primrose

Basal Placentation

The simplest architectural arrangement. The placenta develops at the very base of the ovary, rather than along the walls or a central axis.



SINGLE OVULE

Only a single ovule is attached to the basal placenta.

Sunflower, Marigold

Placentation Matrix (Reference Guide)



(a) Marginal



(b) Axile



(c) Parietal



(d) Free central



(e) Basal

The Ultimate Destiny: After fertilization occurs, the architectural roles shift. The Ovules develop into Seeds, and the surrounding Ovary matures into a Fruit.



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