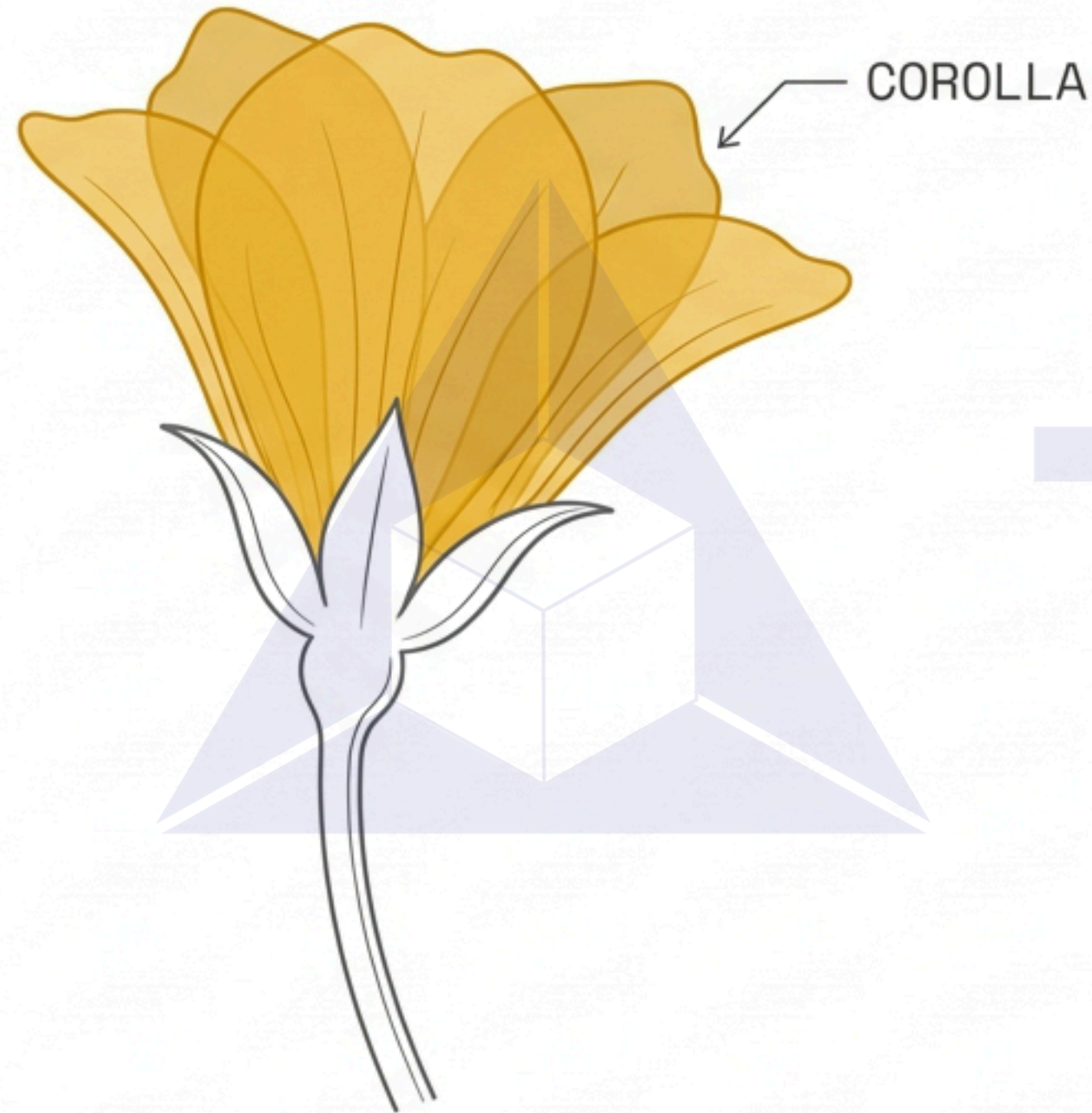


CHAPTER 5: MORPHOLOGY

How Petals Are Arranged

A Visual Guide to the Corolla and
Aestivation in Flowering Plants.



The Corolla Whorl

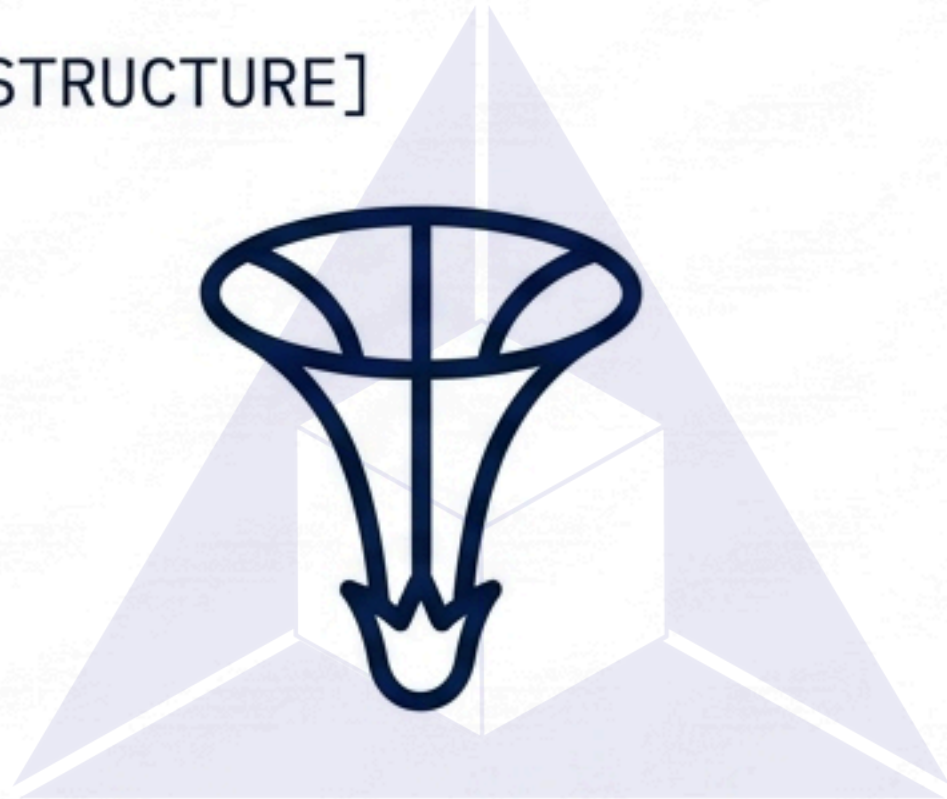
The corolla is the floral whorl composed of petals, sitting just inside the calyx.

Primary Function: Brightly colored to attract insects for pollination.

Petal arrays exhibit immense diversity in shape, ranging from tubular and bell-shaped to funnel-shaped or wheel-shaped structures.

Structural Fusion: Gamopetalous vs. Polypetalous

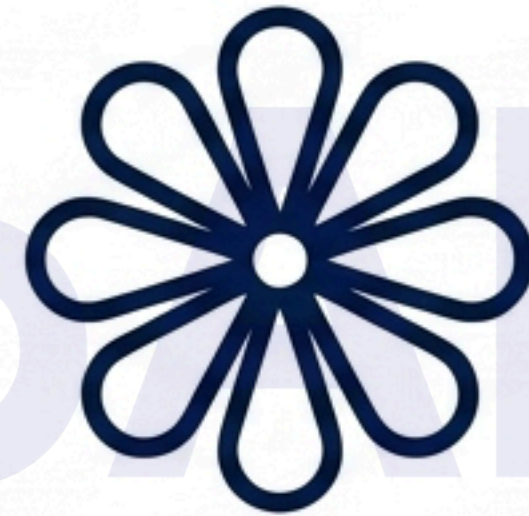
[FUSED_STRUCTURE]



Gamopetalous

Petals are united and fused together into a continuous shape.

[FREE_STRUCTURE]



Polypetalous

Petals remain entirely free and distinct from one another.



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

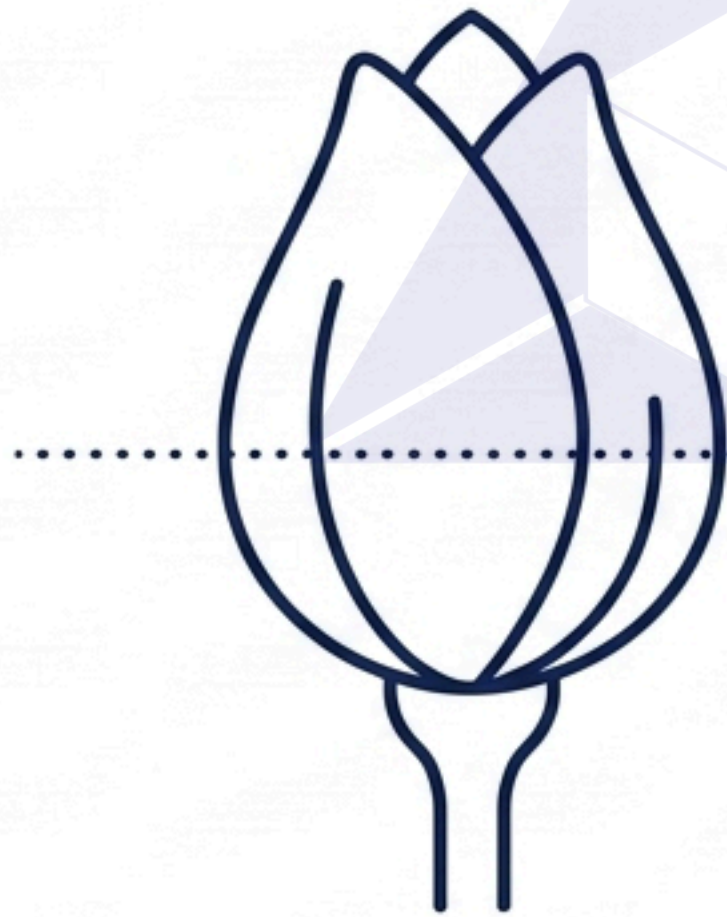
- » Free Study Material, Videos & Infographics
- » Push Your Limits with Level-Based Challenges
- » Climb the Leaderboard Among Fellow Aspirants
- » Practice Unlimited MCQs for NEET & JEE
- » Get Clear Explanations, Not Just Marks
- » Track Your Performance Smarter



Understanding Aestivation

Aestivation is the mode of arrangement of sepals or petals in a floral bud with respect to the other members of the same whorl.

Why it matters: It reveals the hidden geometric pattern of how petals fold and fit together before the flower blooms.

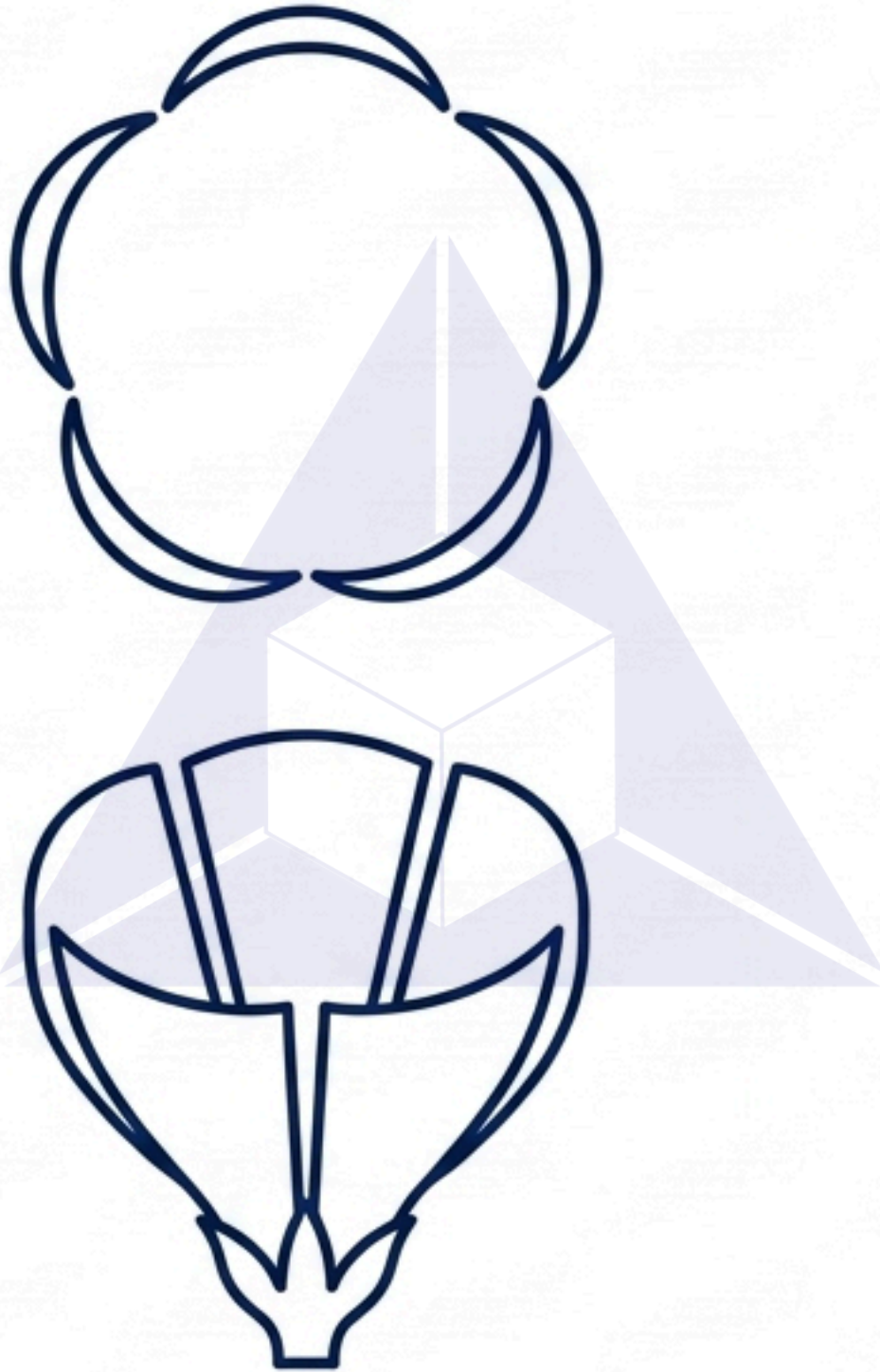


1. Valvate

2. Twisted

3. Imbricate

4. Vexillary



1. Valvate Aestivation

PATTERN: TOUCHING, NO OVERLAP

Sepals or petals in a whorl just touch one another at the margin. There is absolutely no overlapping of edges.

Examples: Calotropis

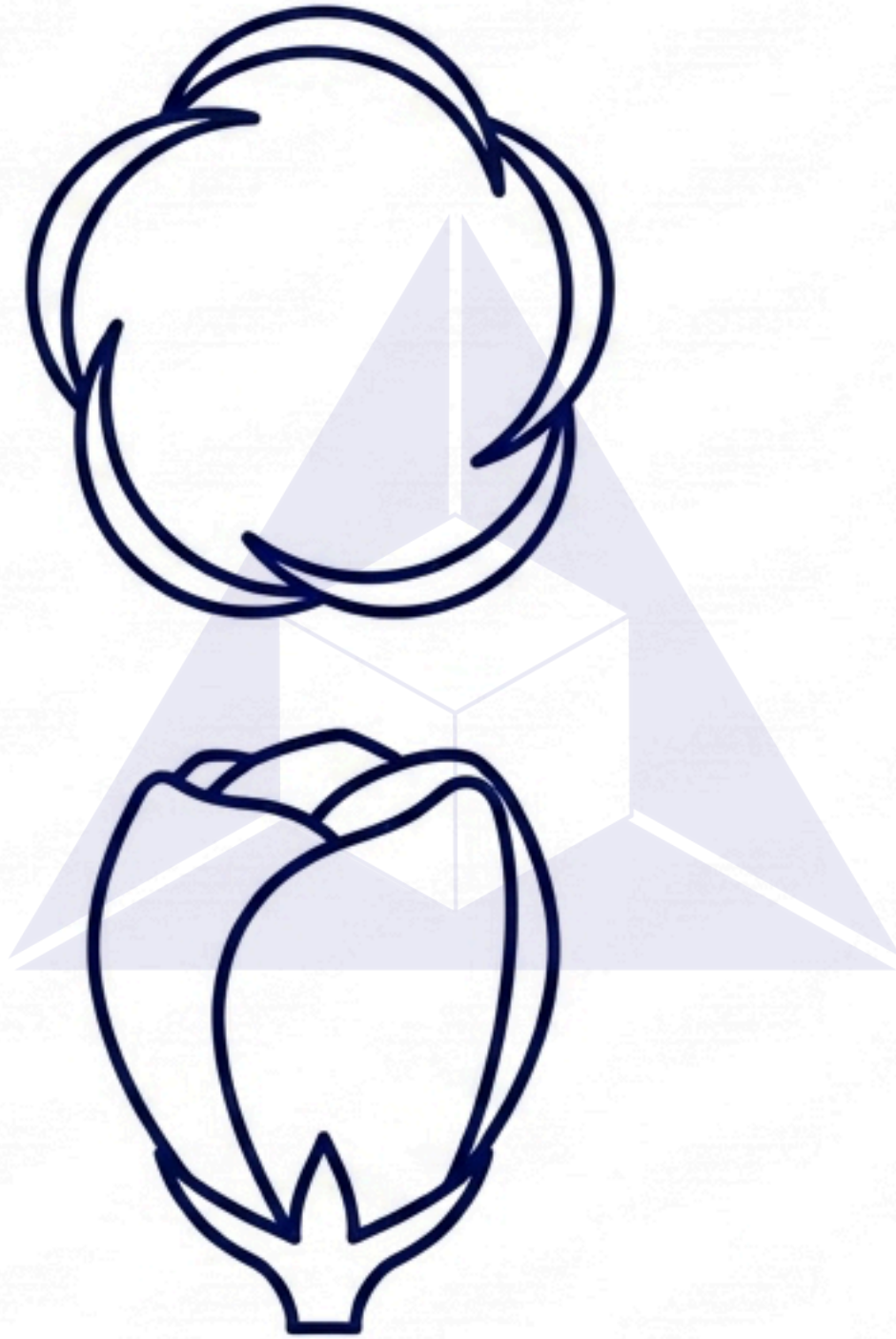


2. Twisted Aestivation

PATTERN: SEQUENTIAL OVERLAP

One margin of the appendage overlaps that of the next one, and so on, creating a consistent, spiraling direction.

Examples: **China rose** **Lady's finger**
Cotton



3. Imbricate Aestivation

PATTERN: IRREGULAR OVERLAP

The margins of sepals or petals overlap one another, but not in any particular, uniform direction.

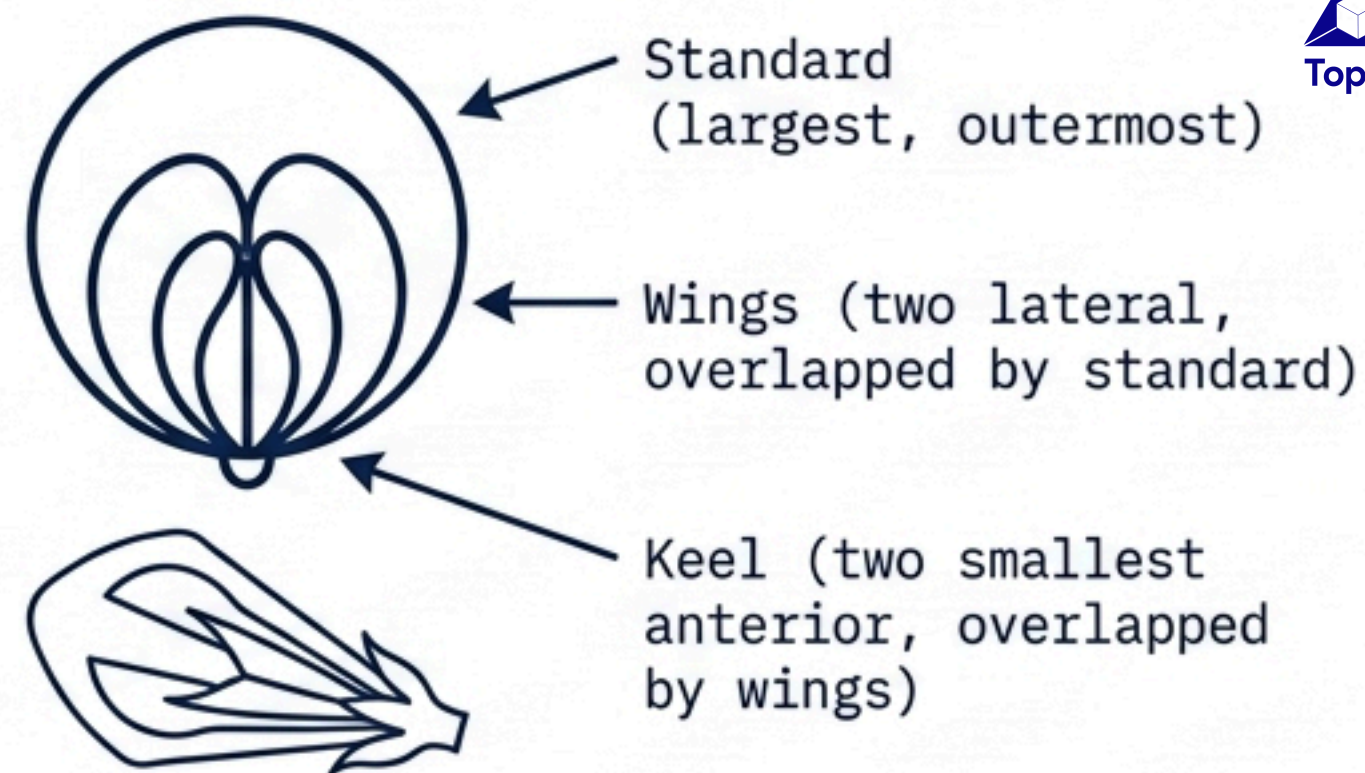
Examples:

Cassia

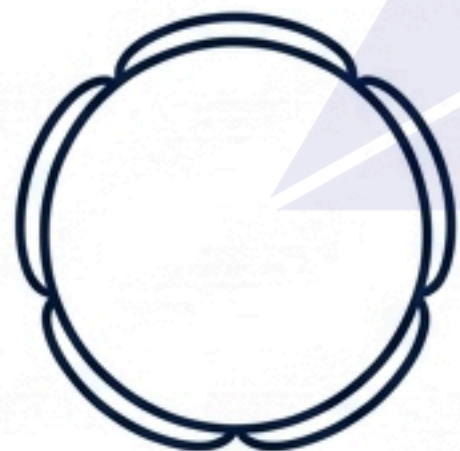
Gulmohur

4. Vexillary Aestivation (Papilionaceous)

Found in pea and bean flowers.
Features 5 specialized petals in a nested hierarchy.



The Aestivation Spectrum



[VALVATE]



[TWISTED]



[IMBRICATE]



[VEXILLARY]

From simple edge-touching to complex nested hierarchies, aestivation provides a crucial morphological fingerprint for identifying flowering plants.



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