

# The Pistil, Megasporangium (ovule) & Embryo sac

Gynoecium → Female Reproductive Part of the flower.

→ monocarpellary  
- one carpel

→ multicarpellary  
- more than one carpel

syncarpous

↳ Carpels fused together

Apocarpous

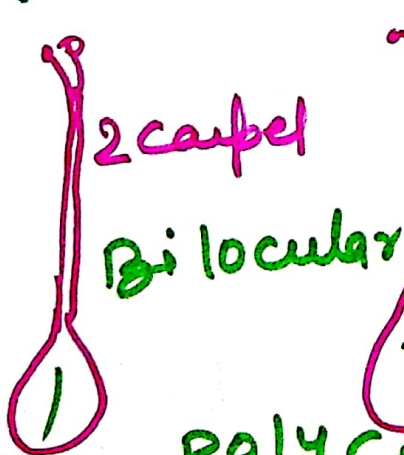
↳ may be <sup>or</sup> united or free

united carpel -

eg. Datura, Hibiscus

free carpel

eg. Michelia



2 carpel

Bilocular



3 carpel

Trilocular



5 carpel

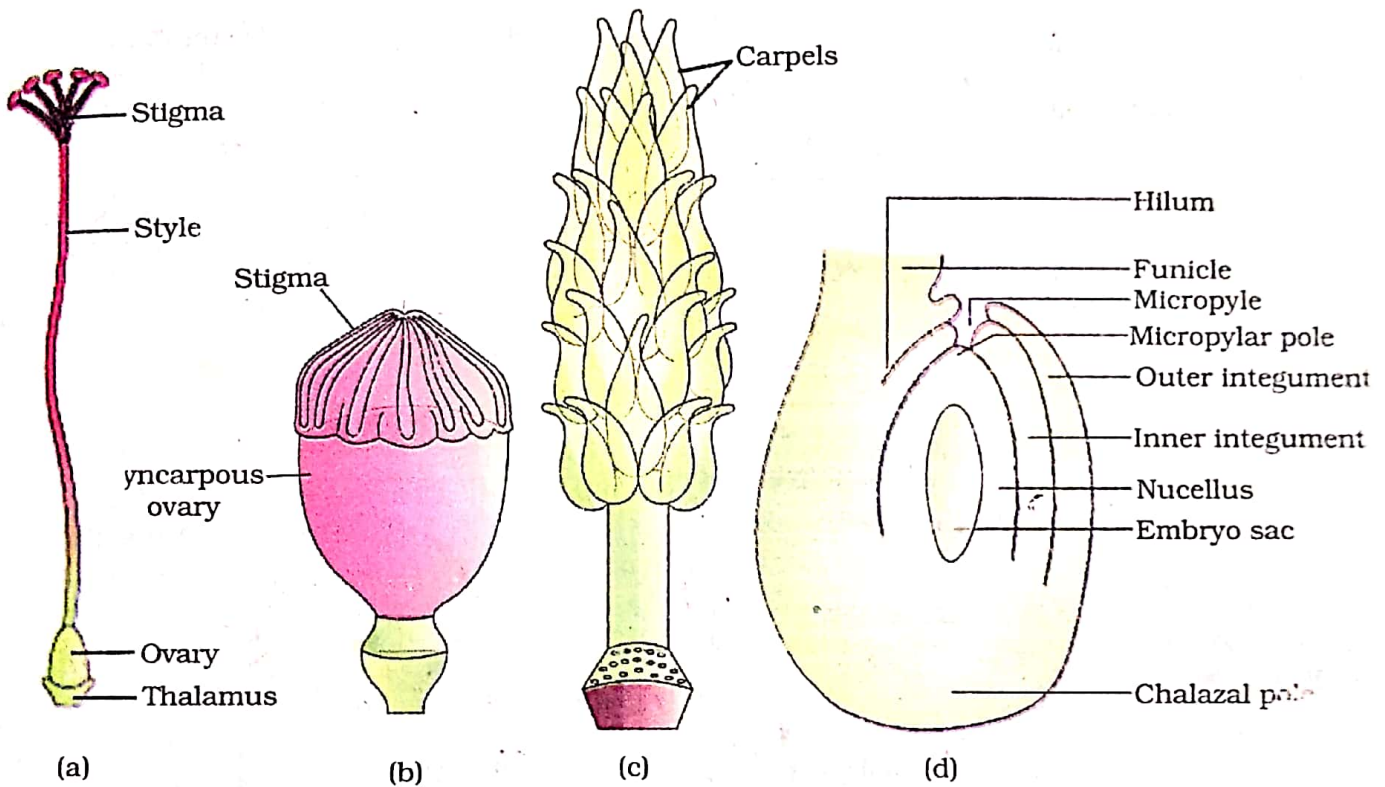
Pentalocular

polycarpellary syncarpous

### 2.2.2 The Pistil, Megasporangium (ovule) and Embryo sac

The gynoecium represents the female reproductive part of the flower. The gynoecium may consist of a single pistil (**monocarpellary**) or may have more than one pistil (**multicarpellary**). When there are more than one, the pistils may be fused together (**syncarpous**) (Figure 2.7b) or may be free (**apocarpous**) (Figure 2.7c). Each pistil has three parts (Figure 2.7a), **the stigma, style and ovary**. The **stigma** serves as a landing platform for pollen grains. The style is the elongated slender part beneath the stigma. The basal bulged part of the pistil is the **ovary**. Inside the ovary is the **ovarian cavity (locule)**. **The placenta** is located inside the ovarian cavity. Recall the definition and types of placentation that you studied in

SEXUAL REPRODUCTION IN FLOWERING PLANTS



**Figure 2.7** (a) A dissected flower of *Hibiscus* showing pistil (other floral parts have been removed); (b) Multicarpellary, syncarpous pistil of *Papaver*; (c) A multicarpellary, apocarpous gynoecium of *Michelia*; (d) A diagrammatic view of a typical anatropous ovule

Class XI. Arising from the placenta are the **megasporangia**, commonly called **ovules**. The number of ovules in an ovary may be one (wheat, paddy, mango) to many (papaya, water melon, orchids).