

Ques Describe structure & types of ovules, or structure of ovule at the time of fertilization of any dicot plant studied by you?

Ans A megasporangium or ovule consists of the nucellus and one or two integuments which leave an opening called micropyle. The ovule remains attached to the placenta of ovary by a stalk called funiculus.

An ovule may arise from the base of ovary or from the inner surface of the ovary. Each ovule is attached to the placenta by a distinct stalk known as funiculus. The point of attachment of the ovule to its stalk is called the hilum. The main body of ovule consists of the parenchymatous mass - the nucellus. Nucellus is the megasporangium proper. One or two coverings or integuments of ovule arise as a collar like mass of tissue at the base of young nucellus & surround all around it except at the apex, where a narrow passage is left called micropyle. Through this micropyle pollen tube penetrates the tissue of megasporangium.

Types or forms of ovule → Mainly, there are five types of ovules. One more type of megasporangium named circinotropous ovule is also known.

① Orthotropous ovule ⇒ In this type the micropyle, chalazal & the hilum lie in the same straight line & above the hilum. Here the body of the ovule is straight or upright. This is considered most primitive type of ovule. e.g. Polygonaceae

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Utricleae

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(2) <sup>(inverted)</sup> Anatrofous ovule  $\Rightarrow$  For this type the ovule is inverted with the micropyle lying very close to the hilum & lateral to it. Here the body of the ovule is completely bent over & fused along the funicle, the fused portion of which called the raphe. This is the most common type of ovule found in angiosperms & is the characteristic of Sympetalae group.

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