

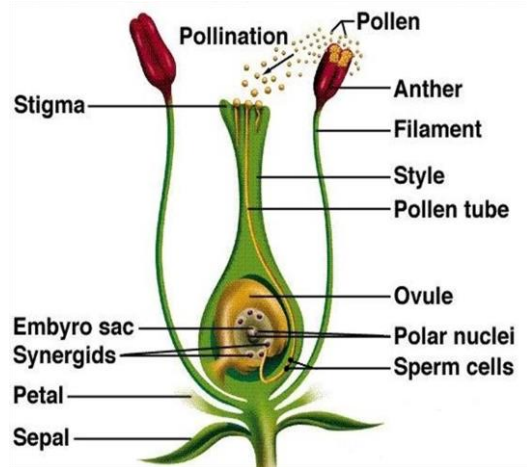
*Name of the student:* ..... *Date:* ...../...../.....

**Fertilization of flowering plant**

Sexual union of motile male gamete with comparatively bigger non-motile female gamete is called fertilization.

**Steps of fertilization:**

- 1) Entry of pollen tube in the embryo sac
- 2) Movement of sperm (male gamete) towards the ovum (egg)
- 3) Fusion of ovum (male gamete) and sperm (female gamete)
- 4) Triple fusion and double fertilization



[N. B: — The tissue that surrounds and nourishes the embryo in the seeds of angiosperms (flowering plants) is called endosperm.]

**Q. Describe the process of fertilization of flowering plant.**

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

**Q. What is double fertilization?**

.....

.....

**Development of embryo:**

After fertilization embryo and endosperm are simultaneously developed in the ovule.

- 1) One of the male gametes meeting with the egg forms zygote.
- 2) Zygote is the first cell of a sporophyte.
- 3) After a certain period of dormancy, the zygote starts to divide.
- 4) Zygote divides transversely.
- 5) The cell towards the micropyle is called the basal cell and the cell towards the center of the embryo sac is called the apical cell.
- 6) The division of these two cells continues side by side.
- 7) Gradually, the apical cell turns into embryo and concurrently the basal cell turns into suspensor of embryo.
- 8) Another male gamete meeting with the secondary nuclei forms triploid endosperm.
- 9) Endosperm acts as the source of nutrition for developing embryo

**Formation of seed and fruit:**

The process of the formation of fruits begins immediately after the completion of fertilization.

- 1) Fertilization ignites stimulation in ovary to make the way of developing fruits steadily.
- 2) The ovary after fertilization with the different parts of it turns into the fruit.
- 3) The ovule with endosperm and embryo turns into the seed. Embryo remains inside the seed.

**Q. Write down the significance of fertilization.**

.....

.....

.....

.....