

(b) (i)

Vas deferens	Vasa efferentia
It is a tube-like structure which conducts the spermatozoa from the epididymis to the penis. Epididymis leads to vas deferens.	It connects the testis to the epididymis. The seminiferous tubules of testis open into the vasa efferentia and take sperms from the seminiferous tubules to the epididymis.

(ii)

S.No.	Spermatogenesis	Spermiogenesis
(i)	It is the process of production of sperms from immature germ cells in males.	It is the process in which spermatids are transformed into mature spermatozoa.
(ii)	Number of cells are increased as each spermatogonium produces four spermatids.	There are no changes in the number of cells as only one spermatid develops into a spermatozoa.
(iii)	The genetic composition of primary sperm cells change from diploid to haploid status during spermatogenesis.	No effects on the genetic material of the germ cells.

OR

(a) Explain the phenomenon of double fertilization.

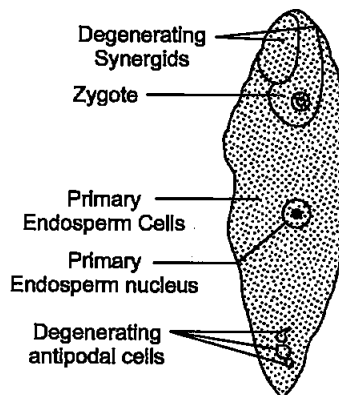
(b) Draw a labelled diagram of a typical anatropous ovule.

Answer : (a) Phenomenon of double fertilization :

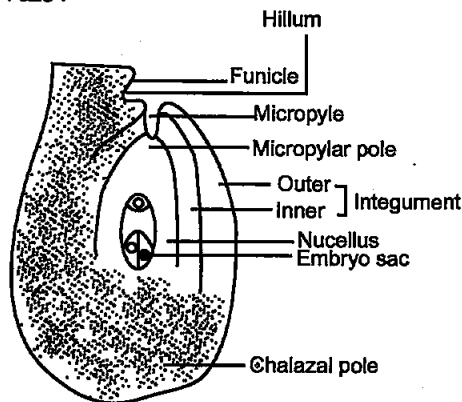
Pollen grains get transferred from the anther to the stigma, and then the pollen tube enters

one of the synergids and releases two male gametes. One gamete moves towards the egg cell and fuses to form the zygote to complete the syngamy.

The other gamete fuses with the two polar nuclei and forms triploid Primary Endosperm Nucleus (PEN). This fusion of one male gamete with two polar nuclei is termed as triple fusion. Since, two kinds of fusion syngamy and triple fusion take place during fertilization in a flower, the process is known as double fertilization. It is a characteristic of flowering plants.



(b) Labelled diagram of a typical anatropous ovule :



Typical Anatropous ovule