

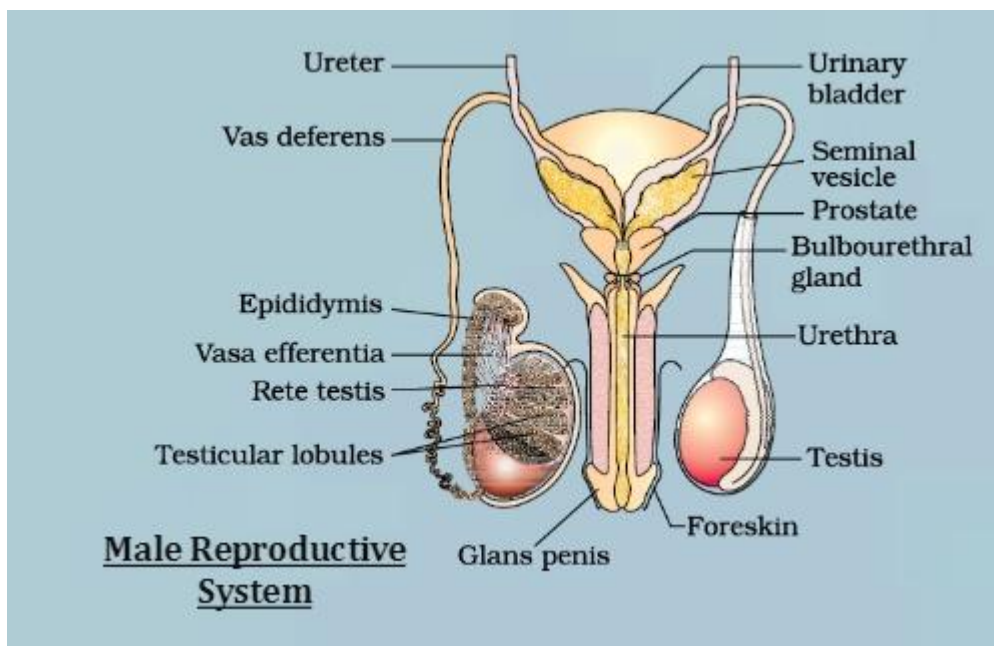
Chapter: Human Reproduction

Introduction:

- Human reproduction is the process by which new individuals of the same species are produced.
- It involves the fusion of male and female gametes to form a zygote, which develops into an embryo and eventually a fetus.

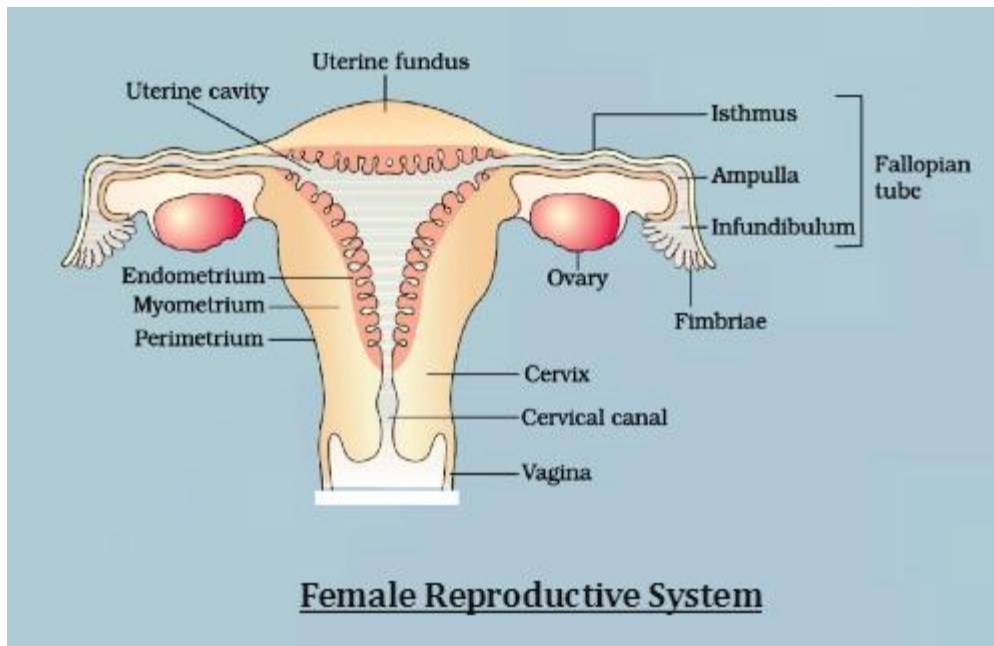
Male Reproductive System:

- The male reproductive system consists of testes, epididymis, vas deferens, seminal vesicles, prostate gland, and penis.
- The testes produce sperm through spermatogenesis, which occurs in the seminiferous tubules.
- Sperms are stored and matured in the epididymis.



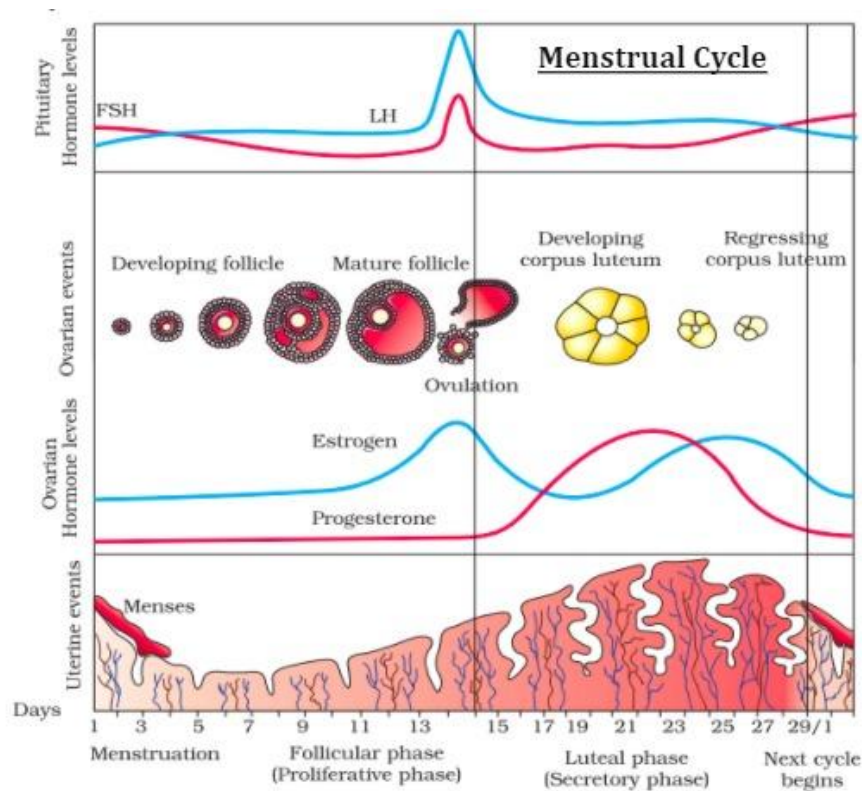
Female Reproductive System:

- The female reproductive system consists of ovaries, fallopian tubes (oviducts), uterus, cervix, and vagina.
- The ovaries produce eggs (ova) through oogenesis.
- The uterus is the site of embryo implantation and fetal development during pregnancy.



Menstrual Cycle:

- The menstrual cycle is a monthly cycle in females that involves the release of an egg, preparation of the uterus for implantation, and shedding of the uterine lining if fertilisation does not occur.
- It is controlled by hormones, including follicle-stimulating hormone (FSH), luteinizing hormone (LH), estrogen, and progesterone.

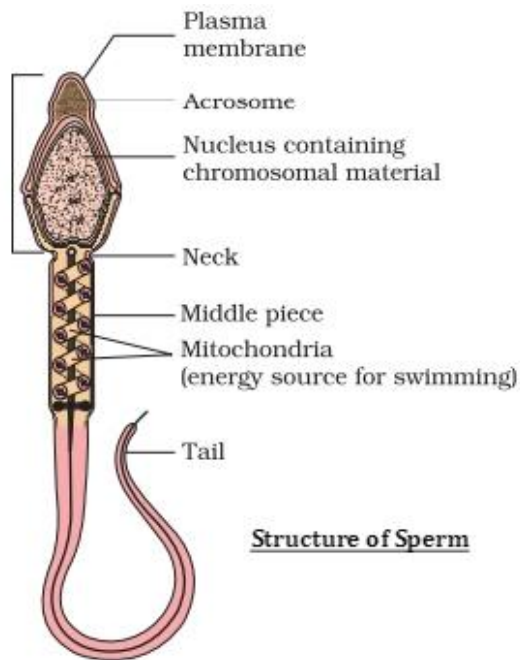


Gametogenesis

- The process of formation of gametes.
- In males, it is called spermatogenesis.
- In females, it is called oogenesis

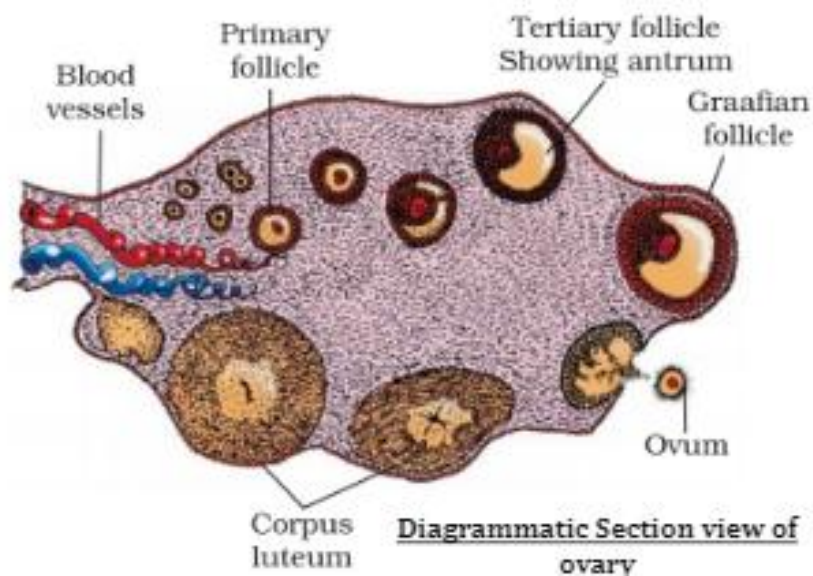
Spermatogenesis

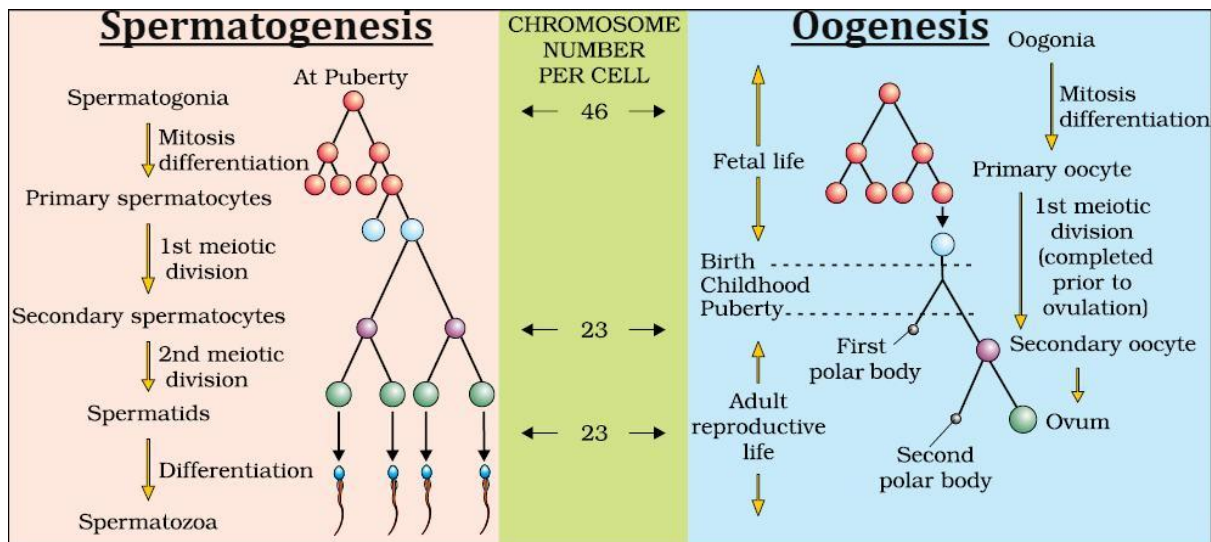
- Production of sperms (spermatozoa)



Oogenesis

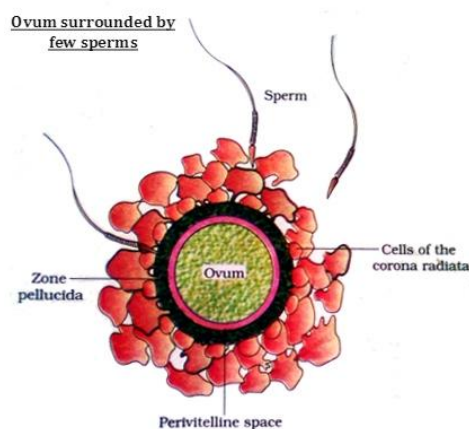
- Production of egg (ovum)





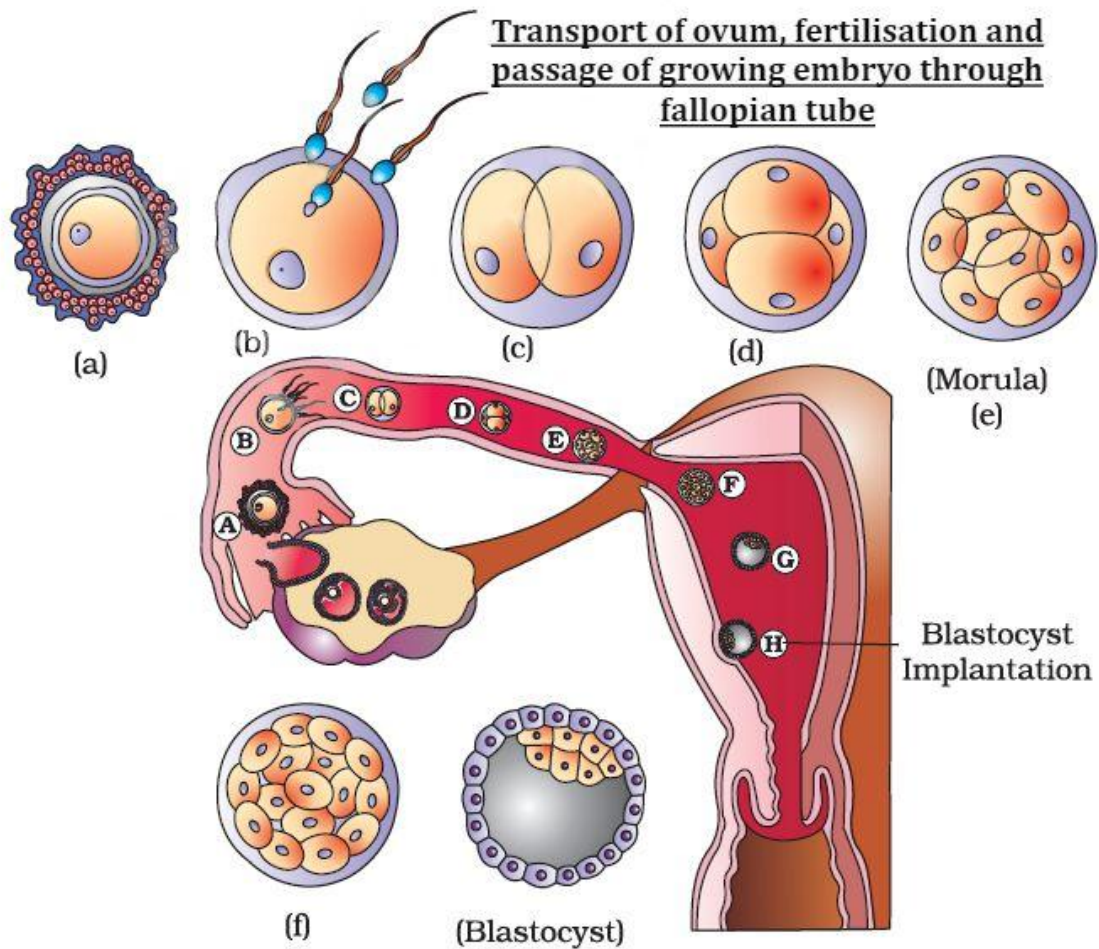
Fertilisation:

- Fertilisation is the fusion of a sperm and an egg to form a zygote.
- It usually occurs in the fallopian tubes.
- The zygote undergoes mitotic divisions and forms an embryo, which implants in the uterus for further development.



Pregnancy and Embryonic Development:

- Pregnancy begins with the implantation of the embryo in the uterine wall.
- The development of the embryo occurs in three stages: zygote, embryo, and fetus.
- The placenta forms, which provides nourishment and oxygen to the developing fetus.



Parturition and Lactation:

- Parturition is the process of giving birth.
- It is triggered by hormonal changes and involves uterine contractions.
- After birth, the mother produces milk through lactation to nourish the newborn.

