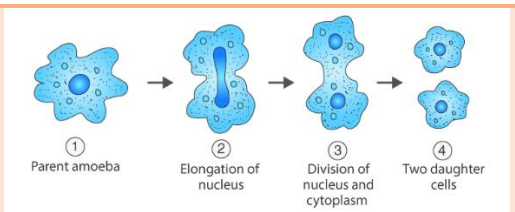
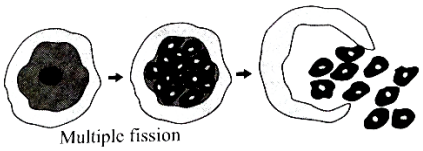
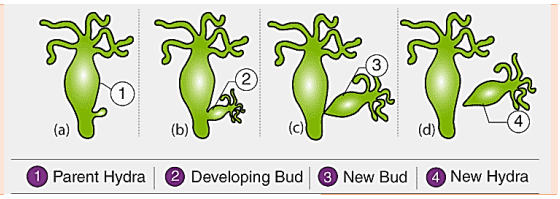
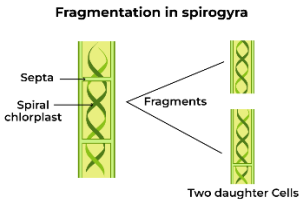
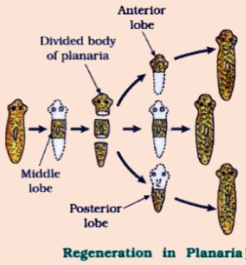
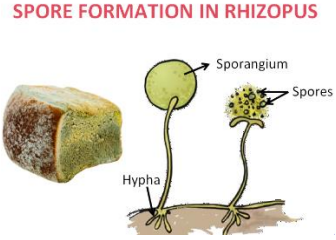
☞ **Reproduct ion is the biological process by which living organisms produce new individuals (Offspring) similar to themselves.**

☞ **It ensures continuity species generation of generation.**

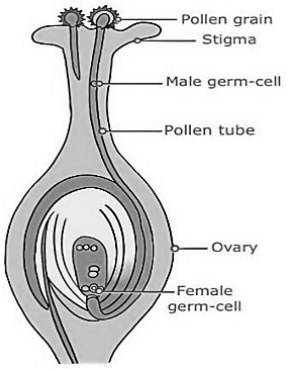
Types : **Asexual Reproduction** **Sexual Reproduction**

Asexual reproduction	Sexual reproduction
In this single parent is involved.	In this two parents are involved.
It does not involve fusion of gametes	Fusion of gamete is involved.
There is no meiosis	Meiosis occurs
No variation in offspring	variation occur

MODE	PROCESS	EXAMPLES	DIAGRAM
Binary Fission	process by which a single cell divides into two identical daughter cells.	Amoeba, Paramecium	
Multiple Fission	process by which a single cell divides into many identical daughter cells.	Plasmodium	
Budding	new individual develops from a bud or outgrowth on the parent organism.	Hydra, Yeast	
Fragmentation	process by which an organism breaks apart into smaller pieces, resulting in multiple new individuals	Spirogyra	
Regeneration	ability of some organisms to regrow or replace damaged or missing body parts.	Planaria, Starfish	
Spore Formation	asexual reproduction where single-celled reproductive cells called spores are produced and develop into new organisms without fusing with another cell	Fungi	

SEXUAL REPRODUCTION IN FLOWERING PLANTS

Reproductive part of plant is **flower.**
Flower consists sepals, petals, stamens and carpels.



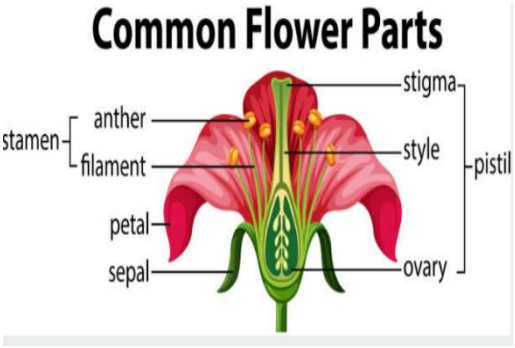
☞ Stamen and carpel contain anther and over respectively.

☞ Anther produces male gamete pollen and ovary contains female gamete egg.

☞ After pollination pollen fuses with egg to for zygote.

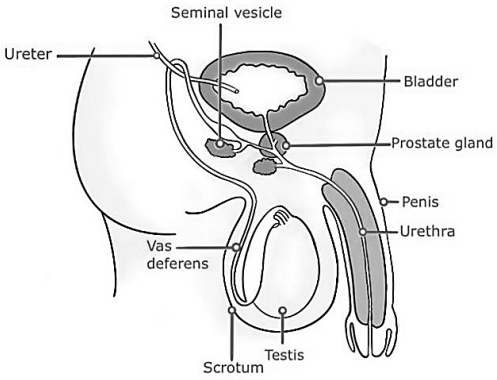
☞ Zygote develops in embryo and within ovule.

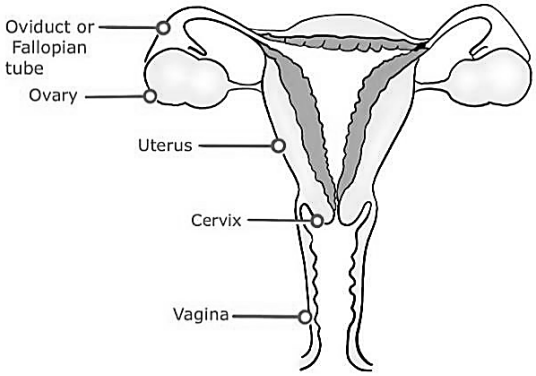
☞ Ovule develops into seed that contains future plant and ovary ripens in fruit.



POST FERTILIZATION CHANGES : Stigma & Style Shrivels & falls Off, Ovary becomes Fruit, Ovules= Seed

REPRODUCTION IN HUMAN BEINGS





PRIMARY REPRODUCTIVE ORGAN = one pair of testes
Function : sperm formation + Release of Hormones Like Testosterone(**Testosterone brings secondary sexual characteristics in boys at the time of puberty.)**
Sperm is delivered through the vas deferens where secretions of the prostate gland and seminal vesicles add their secretions. These secretions help in transportation and provide nutrition to sperm.

PRIMARY REPRODUCTIVE ORGAN = one pair of Ovaries
Function : Ovum formation + Release of Hormones Like Oestrogen & Progesterone(**These hormones bring secondary sexual characteristics in Girls at the time of puberty.)**
On puberty the ovary starts producing eggs and releases one egg each month.

FERTILIZATION is a fusion of sperm and egg. **Site of Fertilization** : **fallopian tube. Site of Implantation** : **Uterus**
The fertilized egg is called a zygote which develops into an embryo.
Uterus is for implantation purposes which hold the developing embryo in its layer through the **placenta** and umbilical card.
When egg is not fertilized the inner lining of uterus breaks and comes out through the vagina as blood and mucus (menses). This cycle repeats every month and is called **menstrual cycle.**

REPRODUCTIVE HEALTH
STDs (Sexually transmitted diseases)- Spread from infected person to healthy person due to unprotected sex. E.g.- HIV-AIDS and Warts (Viral), Gonorrhoea, Syphilis (Bacterial).
POPULATION CONTROL METHODS
- **Mechanical barrier- Condom**
- **Hormonal methods- Pills**
- **Chemical method- Copper-T,**