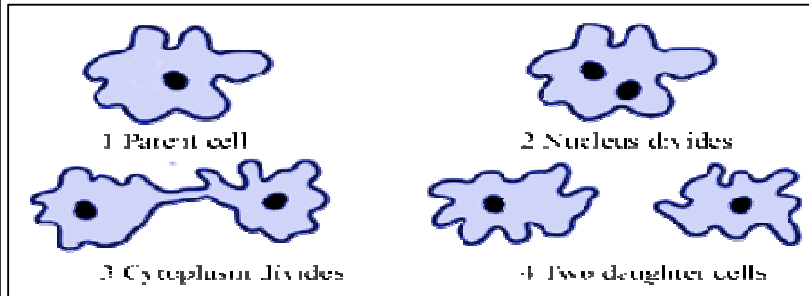


8th - REPRODUCTION IN PLANTS & ANIMALS - I

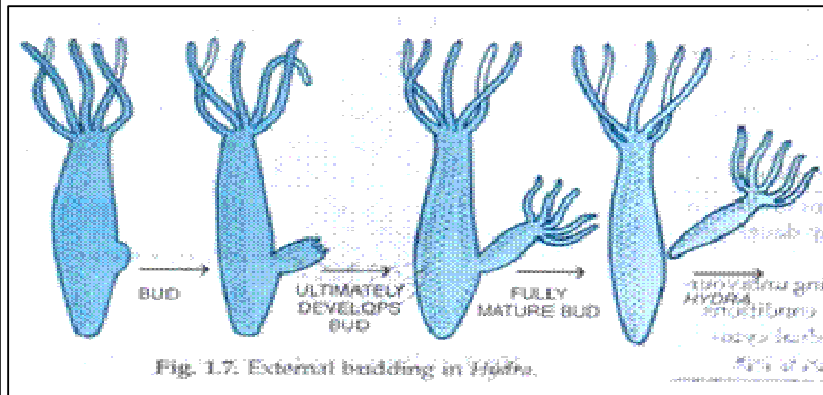
Reproduction: Reproduction may be defined as the process by which living things produce offspring (i.e. young ones) of their own kind. Two types of reproduction in organisms: asexual and sexual.

Asexual reproduction: In asexual reproduction, a new individual is formed from the cells of a single parent. E.g. amoeba and hydra.

1. Binary fusion: Binary fission occurs in amoeba. Amoeba is a unicellular protozoan with single nucleus. It reproduces through the process known as binary fission. It is one of the simplest processes that are seen in several prokaryotes also. Fission is the process in which the parent organism divides into two cells. Through binary fission each parent amoeba gives rise to two equal daughter cells. It is one of the major asexual reproduction processes found in several unicellular animals.



2. Budding: Budding occurs in hydra. In this process, a new organism is developed from a small part of the parent's body. A bud which is formed detaches to develop into a new organism. The newly developed organism remains attached as it grows further. It is separated from the parent organism when it gets matured.



Sexual reproduction: In sexual reproduction, two parents are required to produce a new organism. Most plants and mammals, including human beings, reproduce sexually.

Reproduction in human beings: Both females and males have special reproductive cells called **gametes**. The female gamete is usually called an ovum and the male gamete is called a sperm. The two gametes join or fuse during a process called **fertilization**.

Male and female reproductive organs:

Testis: (plural testes) is an endocrine gland. There are two testes in a male body.

Sperm duct: is a narrow tube that helps to transport sperms produced in the testes.

Penis: transfers the semen and with it the sperms, into the female body.

Urethra: is a tube inside the penis through which semen and urine pass out of the body.

Oviducts: carry the ovum released by the ovary for fertilization.

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Uterus: is the organ where the zygote matures and grows till it is ready to be born.

Vagina: receives the penis during sexual intercourse.

Ovary: is an endocrine gland. There are two ovaries in a female body.

Fertilization: The fusion of male and female gametes to produce new organisms is called fertilization.

(1) Once, a month an ovum is released from the ovary by a process called ovulation.

(2) The ovum moves into the oviduct (fallopian tube).

(3) During sexual intercourse, the male transfers sperms in the vagina through the penis. The sperm travels through a narrow opening called cervix into the the uterus and then the oviduct.

(4) A single sperm fuses with the ovum in the oviduct and fertilization takes place.

(5) The fertilized ovum implants itself into the uterus wall and develops in to a human embryo.

There are two types of fertilization: internal and external.

External fertilization and External Development: Parents release sperms and eggs into the surrounding water, where fertilization occurs and zygotes develop into offspring. For this pattern to succeed, male and female must shed their gametes at the same time and place and in large numbers, e.g. frogs.

Internal fertilization and External Development: Sperms are passed from the male into the female body. The fertilization takes place within the female body. The zygote, after its information, is surrounded by some secretions, reserve food and even a shell for development and protection of the growing embryo. The development of the chick takes place after the egg has been laid, e.g. hen.

Internal fertilization and internal Development: Both fertilization and development take place in the female body. This means that both, formation of the zygote and development of the young one take place inside the body of the female, e.g. human beings and elephant.

