* Sexual Reproduction in Humans:

L.O: Predict biological aspects of sexual reproduction in human and reason out the need of reproductive health.

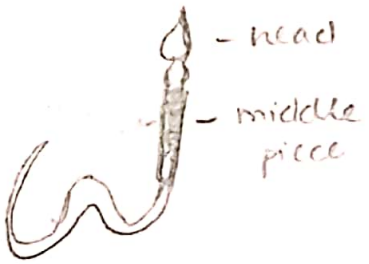
Sexual Reproduction:

-> The fusion of haploid gametes to form a diploid zygote and produced genetically dissimillar offspring

Fertillization
↓
Zygote → blastocyst → embryo → mature foetus
↓ ↓
attaching to the uterus wall. will limbs etc..

Board Question:
Differenciate b/w^n male and female gamete??

	Ovum	Sperm
Size:	Lager	Smaller
Motality:	Non-motile	Motile
Genders:	Female	Male
Sex Chromosome:	XX	XY



Q: Why is female germ cell larger??
↳ Because it is rich with nutrients, stored food-material.
↓
for development of zygote

* Human skin cell : 23 pairs of chromosomes (diploid)
↓ mitosis
* Gamete : (Haploid) 23 chromosomes.
↓ meiosis

PAGE NO.
DATE: / /

→ 3 events in Sexual Reproduction??

Pre- fertillization

↳ Gametogenesis — Gamete transfer

formation of gametes

↓

Fertillization

Syngamy — To form diploid zygote

↳ fusion of male and female gamete

↓

Post- fertillization

zygote — Embryogenesis

* Puberty: The time period when male and female gametes begin to form

↓

changes will occur

↳ secondary sexual characteristics.

↓

due to hormone production

male / female.

testosterone

* Secondary

→ Male:

- Hair growth
- Muscle development
- Development of adam's apple.

* Female:

- Hair growth

- menstruation
- breast development

* Which age ?? 10-14 age
* Pubesty stasts easlies compared to ealies generation ??
  ↳ due. Inactive lifestyle

→ For boys: gametogenis begins during pubesty.
but for girls,
it begins in the foetal stage itself, then is will stop for some time and resume at pubesty, when oestrogen is produced.

[Human Reproductive System]

Gonads, Reproductive Structures,

Secondary reproductive organs.

Males
- → Prostrate gland
- → Seminal vesicles
- → vas deffesens
- → Penis

Female
- → Fallopian tubes (duct)
- → Uterus (where foetus grows)
- → vagina
- → Mammary glands.

Secondary Sexual Characteristics

Males:
- ↳ Muscular built
- ↳ Moustache, Hairy, coarse skin etc...

Females:
- ↳ less muscular
- ↳ high pitch voice.

PAGE NO.
DATE: / /

* Male Reproductive Organ:

A -> Urethra -> Acts as a common passage for sperm and semen

B -> Prostrate gland
Both these glands, secrete a (seminal plasma) white fluid (+sperm) (semen) -> rich with carbohydrates, calcium and certain enzymes.

C -> Seminal vesicles: Function: ~~Prod~~ Provides nutrients and transport for the sperm.

D -> Vas deferens -> reproductive duct / tube.

Function: Carries the sperms from the testis to urethra (outside body)

E -> - Testis, primary sex organ.

Function:- Testosterone - Secondary sexual characteristics
- ~~Prod~~ Protected by Scrotum

Location- Outside the abdominal cavity -> external abdominal cavity.
why?? ->
C> Bcz sperm production require lower temperature than body temperature.

Function: - Produces ~~of~~ sperm, spermatogenesis.

F -> Sperm - male gamete.

* Head -> Acrosome: enable the sperm to go through the
Region: cap-like structure protective layer of ovum.
- Degrade plasma membrane, for fusion
Nucleus: Contains the DNA, 23 chromon

* Middle piece: Nitrochondria for energy to move

* Tail: Help in motility.

-> During fertillization, only head region enters the ovum
∴ mitochondria in humans is inherited from the mother.

→ Why is mitochondria more mother??

↳ Bcz all events → zygote, embryo formation is in ovum.

* Female Reproductive Organ:

- Ovary: Produce sex hormone - Estrogen, progesterone

Produce egg (ova) (ovary.

- Uterus: - Helps the menstrual cycle.
  - Support and product developing embryo

- Oviduct: - Site of fertilization

- Cervix and Vagina: - Birth canal
  - Give birth to new baby