

No:

Date:

Reproduction.

• Structure & Function of Reproductive System in Male:-

Gonads:-

↓
responsible for fertility

↳ primary sex organ

(Testes (Pair))

- in sac-like scrotum
- outside the body (35°C → sperm production)

(Seminiferous tubules)

- highly complex duct system

(germinal epithelium)

- ↳ (6 layers)
- repeated divisions by cells produce Spermatogonia.

(Sertoli/ nurse cells)

- liquid medium
- Protection
- Nourishment
- Lysosome, Mitochondria, GA etc.
- secrete inhibin control spermatogenesis at normal rate.

(Interstitial Leyding cells)

- secrete testosterone
- For production of sperms
- male secondary sexual characteristics

Important:-

Basement membrane / sperm formation
 Germinal Epithelium cells & Sertoli cells → under control of FSH.
 Interstitial/Leyding cells → under control of ICSH.

External Genitalia:-

Penis

- copulatory organ & external Genitalia
- used to transfer sperms in female reproductive tract.

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Duct System:-

Duct



Seminiferous tubules → sites for spermatogenesis.



Vasa deferentia → transfer sperms out of testis.



Epididymis → (6m long) → proximal highly convoluted portion of vas deferens.



Vas deference (sperm duct) → main duct of male reproductive tract.
 • maturation of sperms is completed
 • They become mobile
 • are stored.



Ejaculatory duct → receive secretions from seminal vesicle.



Urethra (urogenital duct) → transfer both urine and semen out of body.

Glands:-

Testis • endocrine glands. ✓

• paired

• produce male sex hormones (testosterone) ✓

Seminal vesicles:- (Exocrine).

Sperm → Semen Formation = 70%

H₂O

Mucus

Alkaline Fluid

Fructose

Citrate.

Prostate Glands:- (Exo)

Semen Formation = 30%

Mucous

Alkaline Fluid:

Secretions
↓
ejaculatory duct.

Bulbourethral /

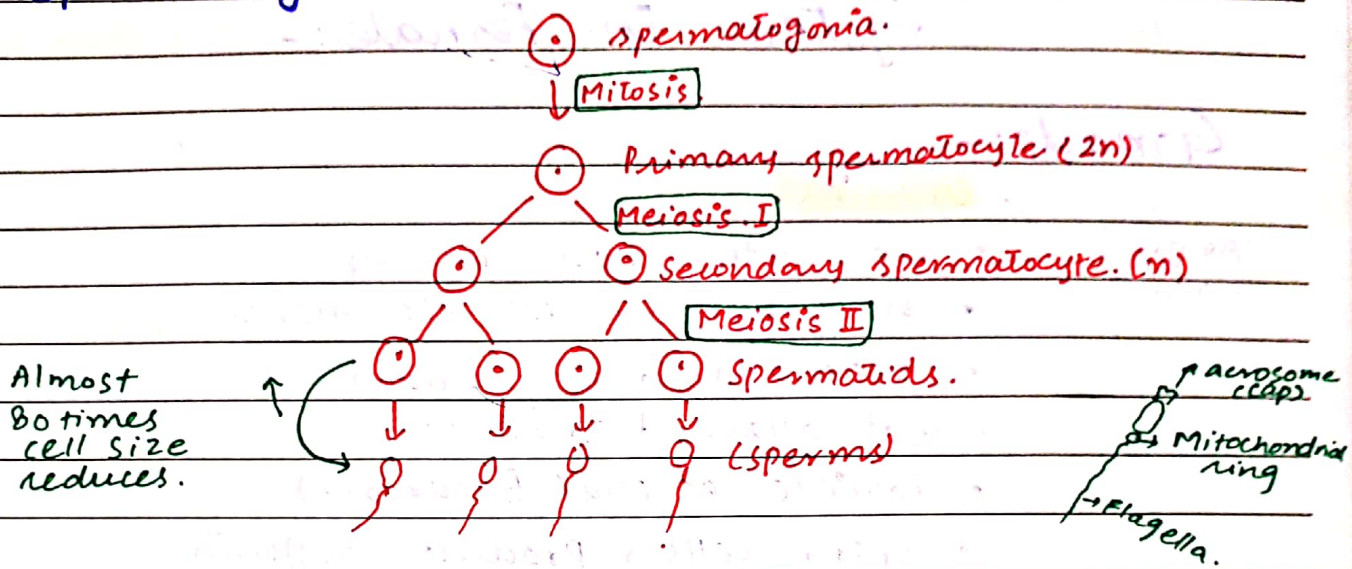
Cowper's Gland (Exocrine)

lubricate urethra

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Spermatogenesis



MCO's

Common duct formed by union of vas deferens and duct from seminal vesicle.

- a) urethra
- b) vasa deferens.
- ✓ c) Ejaculatory duct
- d) All.

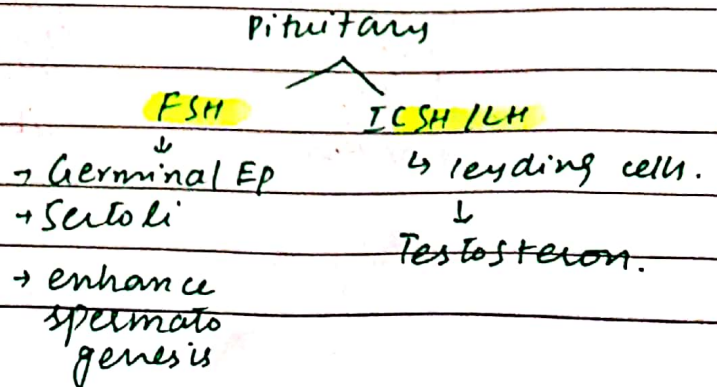
How many sperms are formed from a secondary?

- a) 1
- ✓ (b) 2
- c) 4
- d) 8.

Spermatogenesis involve

- a) Meiosis
- b) Mitosis
- ✓ (c) both a & b
- d) Metamorphosis
- e) All

Hormones:-



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* Structure and Function of Reproductive System in Female:-

Gonads:-

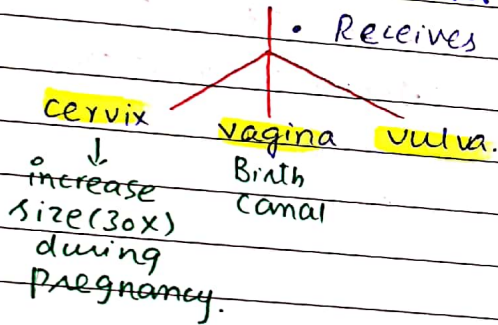
Ovaries.

Spongy in nature.

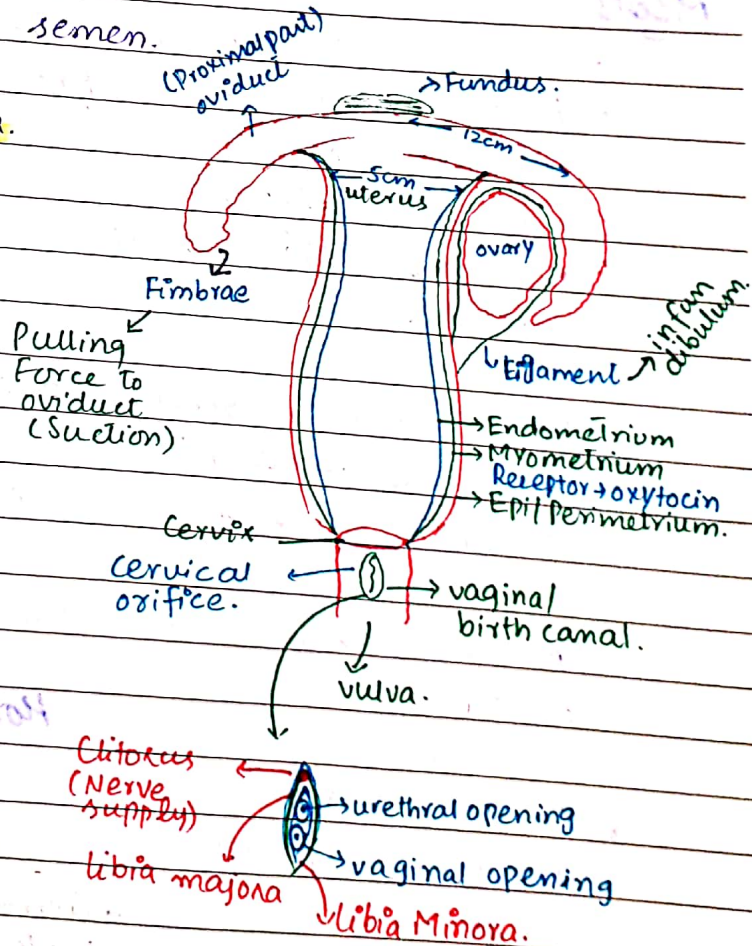
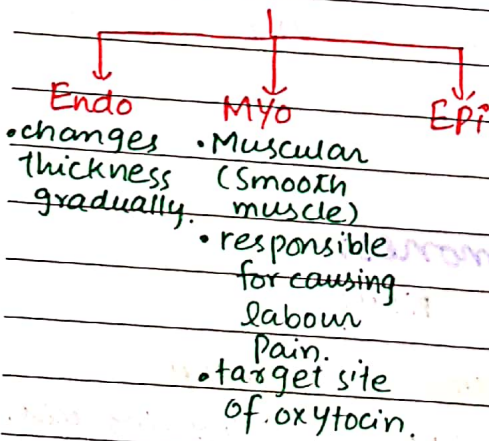
- lie within body cavity.
- held by several ligaments.
- insuspended form in abdomen.
- not attached to others
- Follicle atresia (Breakdown)
- Germ cells → Produce oogonia.

External Genitalia:-

- Receives semen.



Layers.



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Discharge of ovum
↳ ovulation.

egg release into
Coelomic cavity.

Associated Ducts:-

① Oviduct:-

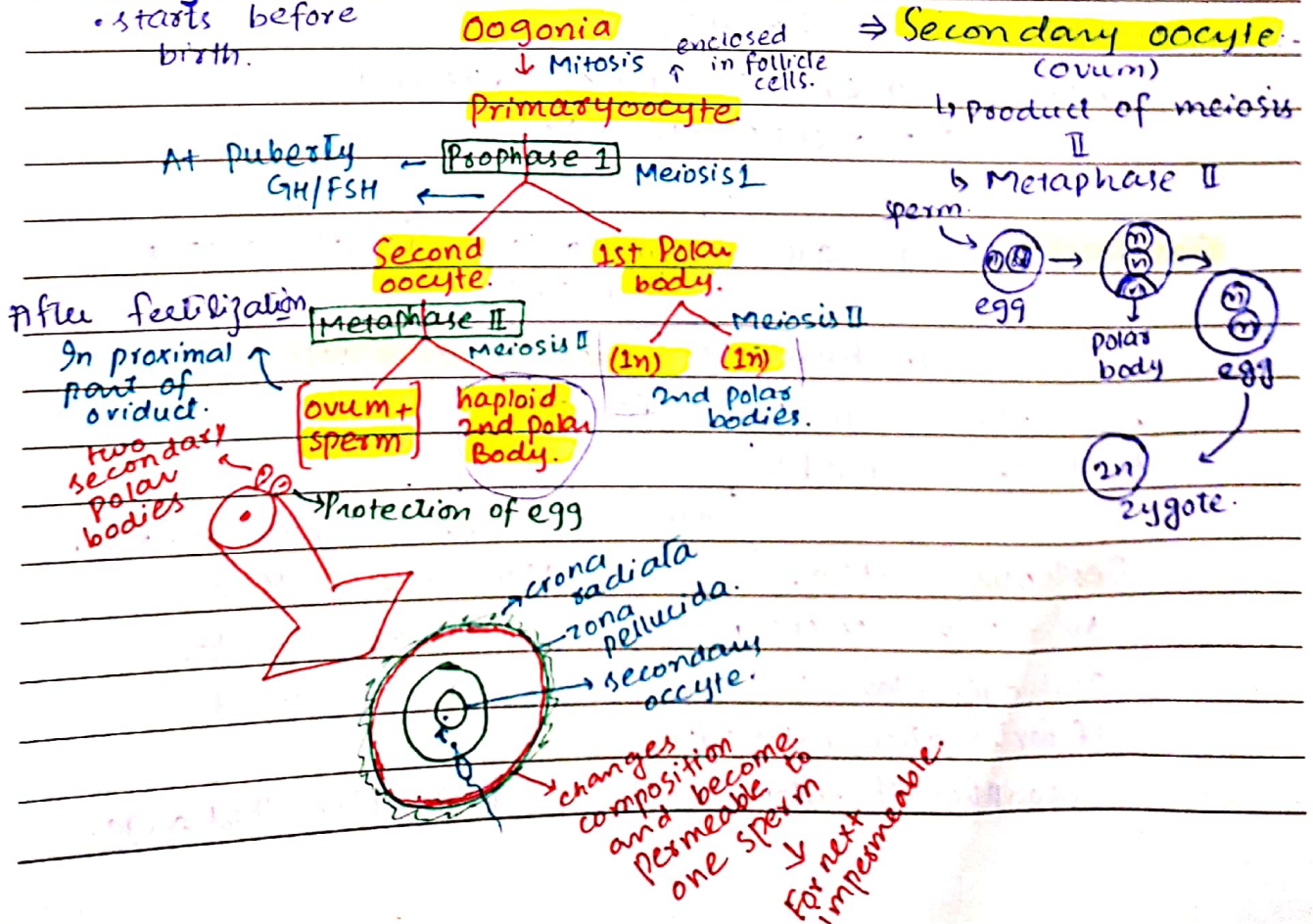
- main duct
- also called fallopian tubules/uterine tube.
- Fertilization occur in proximal part of oviduct.
- leads to uterus.

② Uterus:-

- size & shape of inverted pear.
- muscular organ.
- contain 3 walls.
- act as exocrine gland (during secretory phase)
- also called womb.
- implantation/conception/placentation/development
- opens into vagina through cervix.

Oogenesis:-

• starts before birth.



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Ratios:-

- a) 1:1 (Primary oocyte & ovum)
- b) 1:2 (Secondary oocyte & polar body)
- c) 1:3 (egg & polar bodies)
- d) 1:4 (Primary spermatocyte & sperm)

Polar Bodies:-

After fertilization = 3

After oogenesis = 2

1 month → 1 ovary is functional only:

2 million egg present in female before birth.

470 → use

Others → degenerate

* Menstrual cycle with its stages:-

- Production of egg is cyclic activity.
- repeat after 28 days
- extend (menopause) (45-50 Years)
- 1st (Menarche) (12-13 Years)

Oestrous → in all mammalian female except humans.

in humans → **menstrual cycle**.

- different in same female
- highly variable → hormonal imbalance / malnutrition.

Oestrous Cycle.

All mammals except human

Oestrogen → low level

If fertilization not occur:

resorption of endometrium

Menstrual Cycle

Human Female.

At high level.

Destruction & Discharge.

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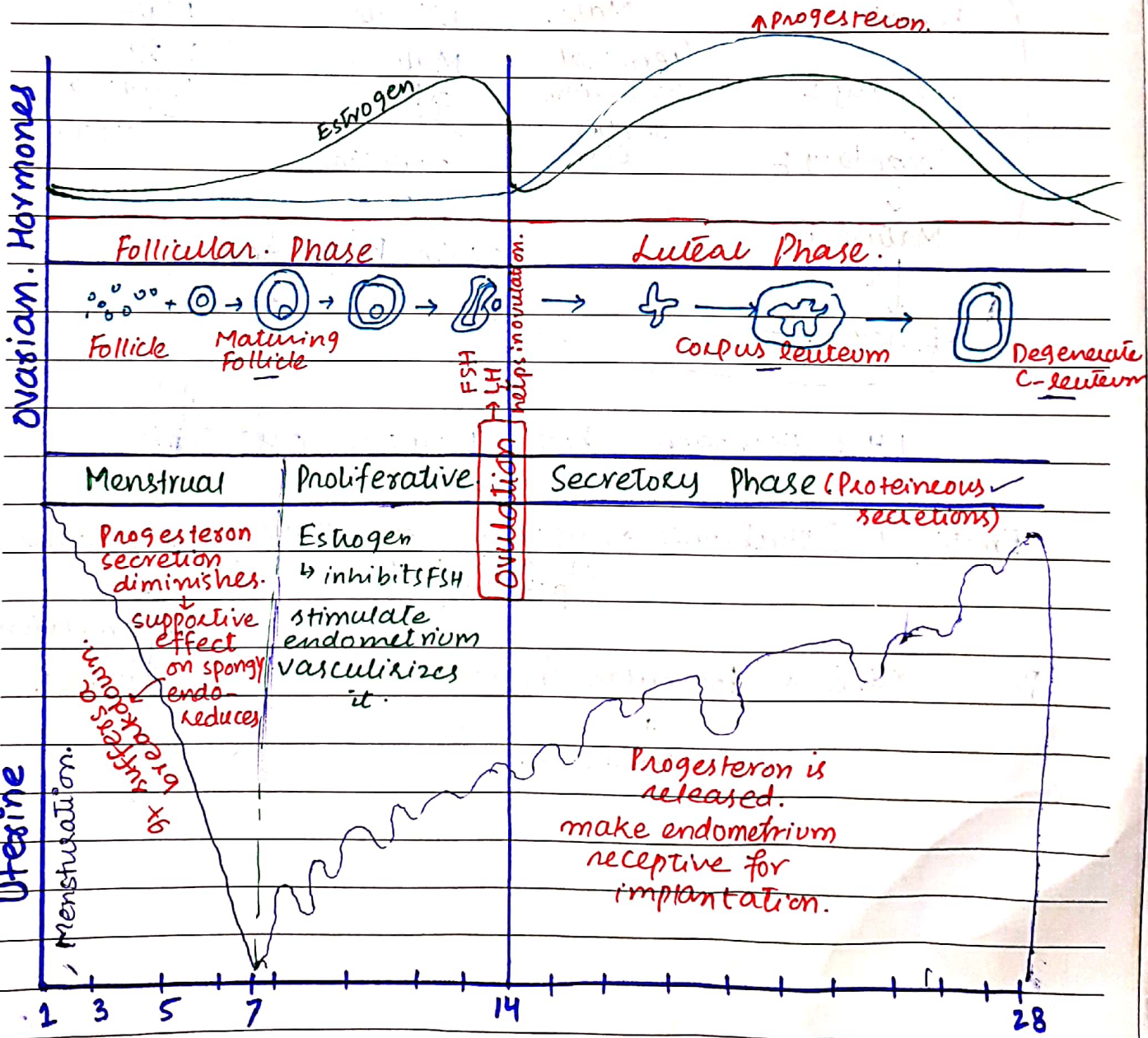
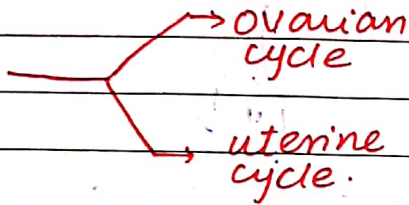
Oestrous cycle.

Egg is conserved
Require stimulus of mating

Menstrual cycle:

Egg is released.
Under hormonal control.

pituitary gonadotrophins.

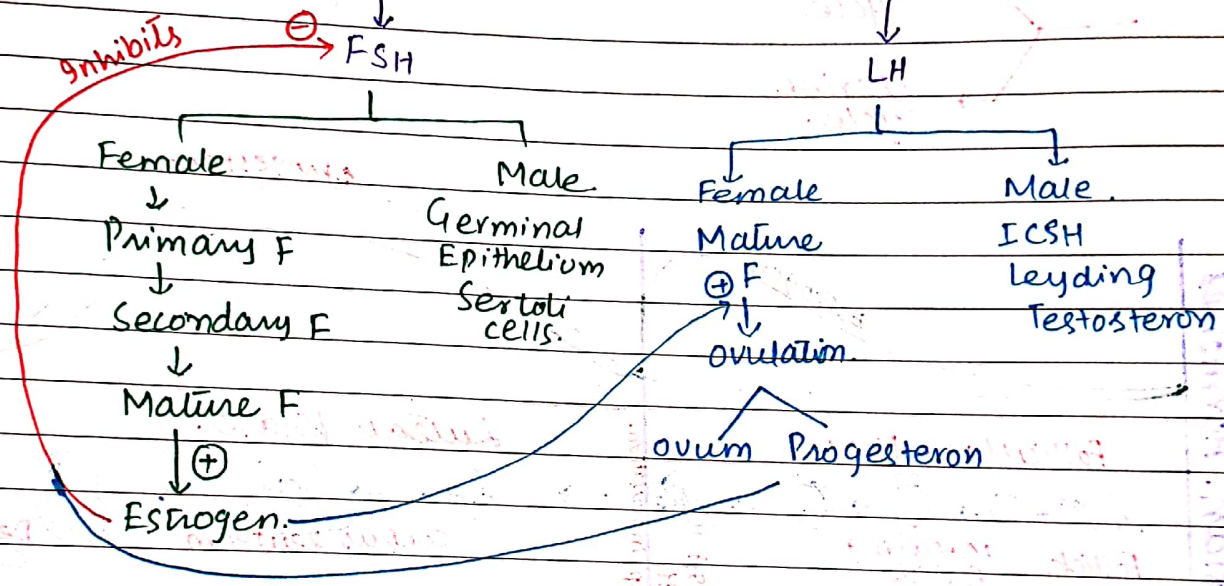


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Hormones:-

Hypothalamus → Gonadotrophic releasing Factor → Anterior Pituitary



(LH & Estrogen both promote ovulation)

Emotional Disturbance → hypothalamus → FSH x → Estrogen ↓
not activating pituitary

↓
Endometrium not developed.

Proliferative & Follicular Phase

⇓
correlate.

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The best time for fertilization

- a) Menstrual
- b) Proliferative
- ✓ c) At 14 day
- d) Secretory.

Secondary Spermatocyte contain how much DNA:-

- a) $1N$
- ✓ b) $2N$
- c) $4N$
- d) None.

Sperms are temporarily stored in

- a) vesae efferentia.
- ✓ b) Epididymis
- c) vas deferens.
- d) urethra.

Semiferous tubule consist of

- ✓ a) Germinal Epithelium.
- b) Spermatogonia.
- c) Spermatocyte
- d) spermatids.

The cells blw semiferous tubules

- a) Spermatocyte
- b) Sertoli
- ✓ c) Intersutial.
- d) None.

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Amount of DNA in sperms compared to in spermatocyte undergoing meiosis is

- a) $\frac{1}{2}$
- ✓ b) $\frac{1}{4}$
- c) same
- d) 1N DNA.

Which is Not STD.

- a) AIDS
- b) Syphilis
- c) Gonorrhoea.
- ✓ d) Herpes Simplex I

Which is treated by antibodies.

- a) Syphilis.
- b) AIDS
- c) Genital Herpes.
- ✓ d) All.

* After Meiosis II.

- ✓ a) 1 ovum & 1 polar body.

* Polar Bodies lack (Nucleus).

Incorrect Pair.

- ✓ a) Follicular - Menstrual
- b) luteal - Secretory
- c) ovulatory - Implantation
- d) None.

During estrous cycle which cause ovulation.

- ✓ a) LH Hormone
- b) Physical Mating.

Presented By

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Remember in Your Prayers.