

## ⊕ Exercises

### I. Multiple Choice questions:

1. ~~(a)~~ The testes are located within the:  
→ Scrotum
2. Amoeba most commonly reproduces by:  
→ Binary fission
3. Identify the stage which is formed after the fertilisation of the egg by the sperm?  
→ Embryo Zygote
4. Internally, the uterus opens into:  
→ vagina

### Ⓜ Short Answer Questions:

1. Distinguish between the following:  
(a) Egg & Sperm

## Sperm

- 1) Sperm is the male gamete.
- 2) Smallest cell in the human body.
- 3) Produces in testes

## Egg

- Ovum / Egg is the female gamete
- The largest cell in the human body.
- Produces in Ovary

## (b) Sexual & Asexual reproduction

### Sexual Reproduction

- 1) It requires the fusion of the male & female gamete.
- 2) It involves two (usually) different individuals.
- 3) Offsprings produced in sexual reproduction are different from their parents.

### Asexual Reproduction

- It does not require the fusion of the male & the female gamete.
- It involves only one individual.
- Offsprings produced in asexual reproduction are exactly similar to their parent.



4) It is a slow process | It is a fast process.

### c) Budding & Regeneration

#### Regeneration

#### Budding

1) Small broken parts or cut off the body of the organism grows or regenerate into separate individuals. In Budding small parts of the body of the parent grows out as a bud which then detaches & becomes a new organism.

2) ex: lizards & Planaria. Ex: Hydra.

2. Define the following terms:

(a) Fertilization - The fusion of female gamete & male gamete is called as fertilization.

(b) Implantation - The fertilised egg (zygote) soon starts developing & by the



time it reaches the uterus, a small ball of numerous cells is already formed. The embryo forms a pit in the wall of the uterus & gets fixed in it. This natural way of fixing of the embryo in the wall of the uterus is called implantation.

3. State the reason why testes lie ~~could~~ outside the abdomen in a scrotum.

→ The reason testes lie outside the abdomen in a scrotum as it keeps the sperms in correct temperature & helps in correct development.

4. Why it is important that ~~a~~ very large number of sperms should be present in the semen?

→ It is important that very large number of sperms should be present in the semen because even if one sperm doesn't fertilise with ova, another can.

5. State the functions of the following:

(a) Ovary: It produces the ovum

(b) testes: It produces the sperm



c) Fallopian tube - fertilisation happens in the fallopian tube.

d) Seminal vesicles - In this place, the sperms are stored.

e) Uterus: It is where the embryo gets implanted & develops into a new born baby.

7. Given here is a section of the female reproductive system in humans.

a) Name the parts labelled 1 to 4.

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- 1) Ovary
  - 2) Fallopian tube
  - 3) Uterus
  - 4) wall of uterus

b) Name the part where fertilisation occurs in the female reproductive system.

→ Fallopian tube.

8. Given alongside is a diagram of the male reproductive system in humans.



label the parts indicated by numbers 1 to 5,  
& state their functions.

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1. Seminal vesicle
  2. Prostate gland
  3. Testes
  4. Urethra
  5. Sperm duct.

### Long Answers

① How does a single-celled fertilized egg grow into an adult human body?

→ The male gamete, sperm is inseminated inside the female vagina by copulation. Fertilisation occurs with ovum in the fallopian tube. Following fertilization the embryonic stage of development continues until the end of the 10<sup>th</sup> week (gestation age). The embryo in the next few days travel down the fallopian tube dividing several times to form a morula. Further cellular division is accompanied by the formation of a small cavity between the cells. This stage is called a blastocyst. The blastocyst reaches the uterus at roughly the fifth day after fertilisation. The embryo becomes embedded in the endometrium in a process called implantation. Embryo undergoes



Page No. \_\_\_\_\_  
Date: \_\_\_\_/\_\_\_\_/\_\_\_\_

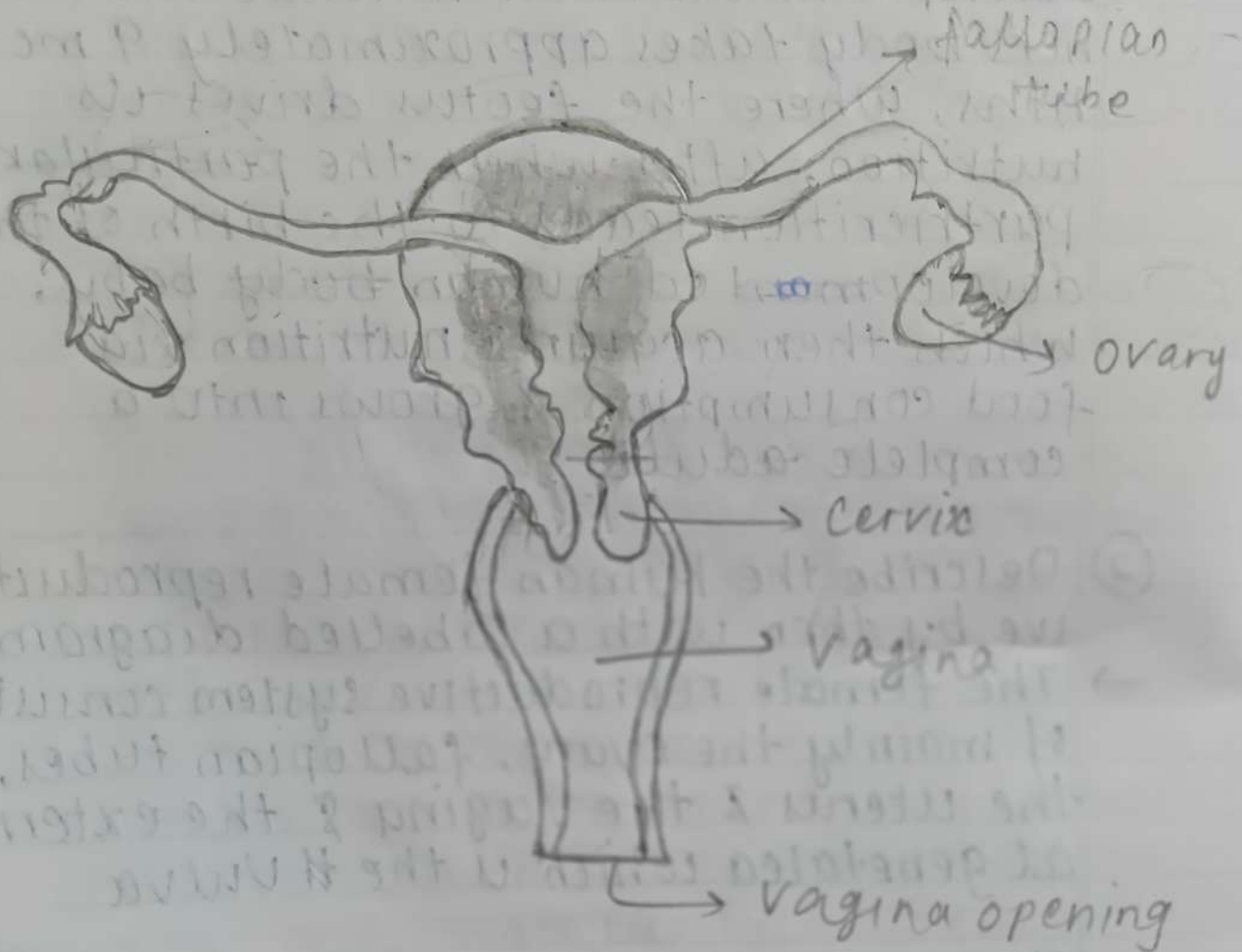
differentiation, so as to produce varied cell types (such as blood cells, kidney cells, & ~~nerve~~ nerve cells). The time period of foetus development until birth is called gestation. Foetus development ~~until birth~~ inside the mother's body takes approximately 9 months, where the foetus derives its nutrition, after which the parturition leads to the birth of the developed human ~~body~~ baby, which then acquires nutrition via food consumption & grows into a complete adult.

(2) Describe the human female reproductive system with a labelled diagram.

→ The female reproductive system consists of mainly the ovary, fallopian tubes, the uterus & the vagina & the external genitalia which is the ~~#~~ vulva.

- The ovary is responsible for the oogenesis where the egg formation takes place.
- The fallopian tube carries the egg to the uterus & the fertilisation takes place.

- The uterus which is also the womb where the implantation takes place & here the foetus develops.
- The vagina is the canal where the coitus takes place.



Female Reproductive system

The ovary is responsible for the production of eggs. The fallopian tube carries the egg to the uterus & the fertilisation takes place.