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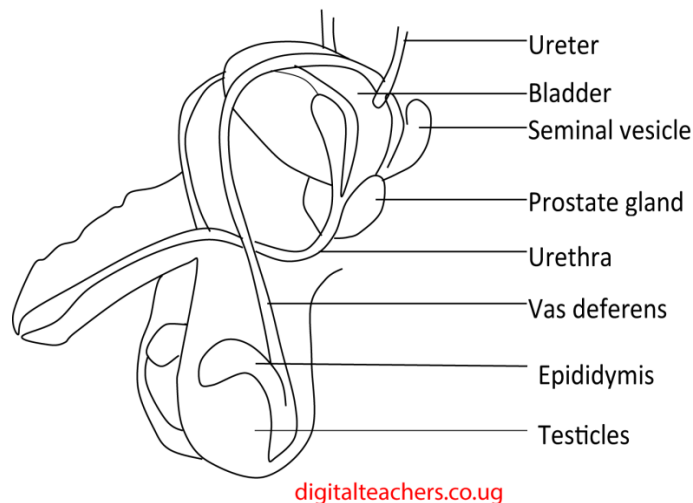
Based on, best for sciences



Reproduction

Reproduction is the process by which living things give rise to offspring of the same kind

The male reproductive system



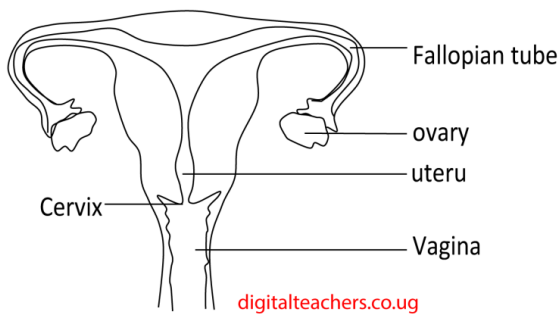
Parts of the male reproductive system

Parts	Functions
Testis	Produce sperms, the male gametes and male hormones
Scrotum	Bag that hold and protect the testis
Sperm duct/ Vas deferens	Carries sperms from the testis to urethra
Urethra	Passage for both semen and urine

Penis	Deposits sperms into the vagina
Epididymis	Stores sperms

The female reproductive system

Female reproductive system

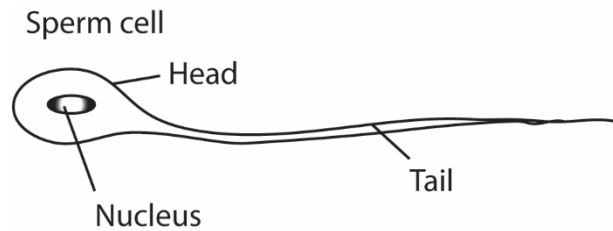


Parts of the male reproductive system

Parts	Functions
Ovaries	They produce eggs or ova (singular Ovum) a female gamete Produce hormones such as estrogen The process of producing ova is called ovulation
Oviduct/Fallopian tube	This is where fertilization takes place Fertilization is the union of male and female gametes
Uterus/womb	This is where the fetus develops
Cervix	This is the lower part of uterus. It allows sperms into the uterus Retains the fetus in the uterus before birth
Vagina/birth canal	It is where sperms are deposited It is a tube through which the baby passes during parturition /giving birth

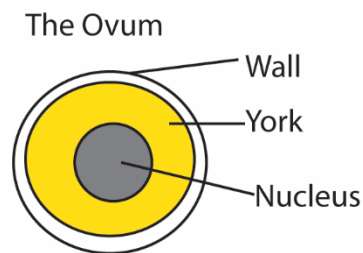
A sperm

It is a male reproductive cell. Sperms are produced in testes.



The Ovum

It is the female reproductive cell



The egg is produced in the ovary.

The process of releasing an egg from the ovary into a fallopian tube is called ovulation. It occurs every 28 days.

Egg remain alive for 2 days. If not fertilized, the egg and the thickened walls of the uterus come out of the body in form of blood by the process of **menstruation**.

Fertilization in human beings

This is the union of female (ovum) and male gamete (sperm) to form a **zygote**. It occur in the upper part of the Fallopian tube.

Immediately after fertilization a woman is said to be pregnant or to have conceived.

After fertilization ovulation and menstruations stop until after child birth

Types of fertilization

- (i) **Internal fertilization** is the fusion of male and female gametes inside the female body, for example in human being, birds and reptiles.
- (ii) **External fertilization** is the fusion of male and female gametes outside the female body for example in amphibian and fish.

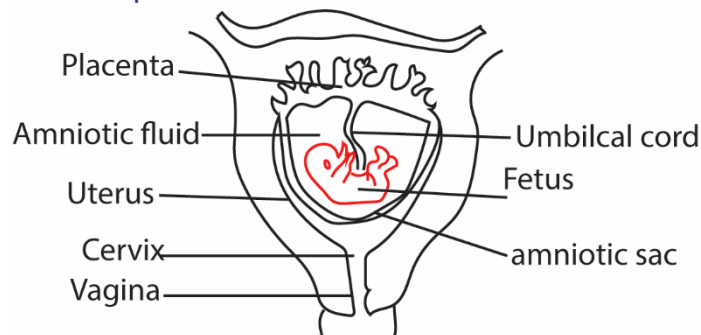
Implantation

This is the attachment of the zygote to the walls of the uterus. Immediately after implantation, the zygote becomes an **embryo**.

An embryo develops into a fetus after 6 to 8 weeks

The fetus develops and at birth is called a newborn baby.

Development of fetus in the womb



Placenta

This is an organ of attachment between the mother and the fetus

Functions of the placenta

1. Prevents mixing of blood of the mother and fetus.
2. Supplies Oxygen, water, amino acid, glucose and other essential minerals from the mother to the fetus
3. Allows transfer of Carbon dioxide, urea and other wastes from fetal blood to mother's blood.
4. Prevents certain pathogens from entering fetal blood
5. Produces HCG a hormone that support development of fetus.
6. It allows certain maternal hormones to cross to the fetus.

Why should mothers and fetal blood not mix?

1. To prevent blood incompatibility due to different blood group
2. To prevent incompatibility due to different rhesus factors
3. To prevent infections from the mother attacking the fetus
4. To protect the fetus from high blood pressure of the mother's blood

Umbilical cord

This is a flexible tube that connects the fetus at the abdomen to the placenta

Functions of the umbilical cord

- (i) Transports food nutrients and oxygen from the mother to fetus
- (ii) Transports waste products from the fetus to the mother

The amniotic fluid

This is a clear jelly-like liquid that surrounds the fetus.

- (i) Protects the fetus against shock resulting from external force.
- (ii) Prevents the fetus from getting dry
- (iii) Reduces friction between the fetus and the uterus
- (iv) Allows movement of the fetus in the amniotic sac.
- (v) Acts as lubricant during birth

Signs of pregnancy

- (i) Breasts become soft, tender and sensitive
- (ii) Abdomen enlarges
- (iii) Menstruation stops
- (iv) Morning sickness such as vomiting and nausea in the morning

Gestation period

This is the period between implantation and child birth. In humans it is about 9 months

Stages of child birth

- (i) Labor pains – caused by contraction of the uterine wall.
- (ii) Dilation – widening of the cervix
- (iii) Bursting of amniotic membrane
- (iv) Parturition or birth
- (v) Tie and cut the umbilical cord. Tying of umbilical cord prevent excess fetal bleeding.

Breast feeding

This is the feeding of a baby with milk from the breast. It is advisable that a baby is exclusively breast fed for 6months.

Importance of breast feeding

- Breast Milk Provides Ideal Nutrition for Babies.
- Breast Milk Contains Important Antibodies.
- Breastfeeding May Reduce Disease Risk like allergies
- Breast Milk Promotes a Healthy Weight.
- Breastfeeding May Make Children Smarter.
- Breastfeeding May Help You Lose Weight.
- Provide bond pair between a baby and child

Ante –natal care

This is the **care** provided by skilled health-**care** professionals to pregnant women and adolescent girls in order to ensure the best health conditions for both mother and fetus during pregnancy.

Importance

Good **antenatal care** includes regular screening which can detect and prevent early complications such as, infections, hypertension and pregnancy diabetes; which can dramatically affect the fetus.

Services provided at ante-natal care

1. Provides women and their families with appropriate information and advice for a healthy pregnancy, safe childbirth, and postnatal recovery, including **care** of the newborn, promotion of early, exclusive breastfeeding, and assistance with deciding on future pregnancies in order to improve pregnancy outcomes.
2. Ultrasound scan
3. Provide deworming tablets
4. Checking pressure of pregnant mother
5. Urinalysis – checking for infections in urine
6. Checking fetal heart rate

Treatment of diseases

Family care to pregnant women.

- (i) Provide a balance diet
- (ii) Show them love
- (iii) Give them enough rest
- (iv) Give appropriate dressing

ADOLESCENCE

What is adolescence?

Adolescence is the period between childhood and adulthood, a period within which both boys and girls become sexually mature and are able to reproduce. This period of adolescence is also known as **puberty**.

Changes that take place during adolescence

The changes that occur during adolescence can be either physical or emotional. Below are the physical changes that occur in boys and in girls.

Physical changes in girls

1. The breasts enlarge
2. Hips broaden
3. There is rapid growth
4. Hair grows in the groin and armpit region
5. The oil glands of the skin produce more oil and pimples may be seen on the face
6. Eggs are formed and released from the ovary in a process called **ovulation**.

The egg may be fertilized leading to birth of a child. If the egg is not fertilized, the uterus sheds blood in what is known as the monthly periods or **menstruation**.

Physical changes in boys

1. Shoulders broaden
2. They have hair (beards) on the chin
3. The voice breaks
4. The rate of growth increases
5. There is growth of hair in the groin, armpits, chest and legs
6. They start to produce sperms in the testis, which are able to fertilize eggs leading to birth
7. The oil glands of the skin produce more oil and pimples may be seen on the face.

Disadvantages of becoming a parent at an early age.

- (i) Drop out of school
- (ii) Failure to look after one's children.
- (iii) The child may not be ready for marriage
- (iv) Teenage pregnancy may lead to fistula
- (v) May lead to obstructed delivery.

Infertility

Infertility means not being able to get pregnant after one year of trying (or six months if a woman is 35 or older). Women who can get pregnant but are unable to stay pregnant may also be infertile.

Infertility in men is most often caused by:

- a. A problem called varicocele (VAIR-ih-koh-seel). This happens when the veins on a man's testicle(s) are too large. This heats the testicles. The heat can affect the number or shape of the sperm.
- b. Other factors that cause a man to make too few sperm or none at all.
- c. Movement of the sperm. This may be caused by the shape of the sperm. Sometimes injuries or other damage to the reproductive system block the sperm.
- d. Sometimes a man is born with the problems that affect his sperm. Other times problems start later in life due to illness or injury. For example, cystic fibrosis often causes infertility in men
- e. importance

Infertility in women is most often caused by:

- a. Failure of ovulation
- b. Damage to fallopian tubes such blocked fallopian tubes due to pelvic inflammatory disease, endometriosis, or surgery for an ectopic pregnancy
- c. Damage to uterus such as uterine fibroids, which are non-cancerous clumps of tissue and muscle on the walls of the uterus.
- d. Problems with the cervix, some **women** have a condition that prevents sperm from passing through the cervical canal
- e. Age can contribute to **infertility** because as a woman ages, her fertility naturally tends to decrease.
- f. Some women have polyps and fibroids that interfere implantation
Incorrect frequency and or timing of intercourse may make conception unlikely and couples may need to be counselled on the most appropriate time when ovulation is likely.

Family planning

The method whereby a couple chooses when to have children according to their income.

Advantages or importance of family planning

Prevents unwanted pregnancy

Leads to child spacing.

Allows the uterus to repair before the next pregnancy

Methods of contraception include:

- (i) long-acting reversible contraception, such as the implant or intra uterine device (IUD)
- (ii) Hormonal contraception, such the pill or the Depo Provera injection.
- (iii) Barrier methods, such as condoms.
- (iv) Emergency contraception.
- (v) Fertility awareness.
- (vi) Permanent contraception, such as vasectomy and tubal ligation.

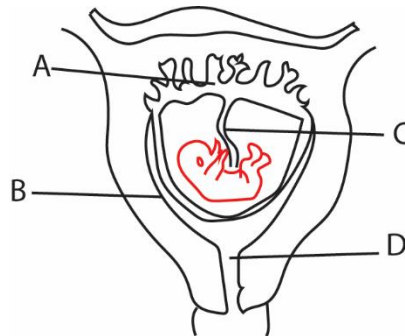
Disadvantages of big families

- (a) **Large family** size leads to scarcity of basic services like food, health, clothing and shelter.
- (b) Lack of basic amenity like food leads to malnutrition which affects the health of children.

Revision Questions

1. Draw a sperm in the space below:

2. The following diagram shows reproduction in human beings. Use it to answer the questions that follow



(a) Name the parts A and B

A.

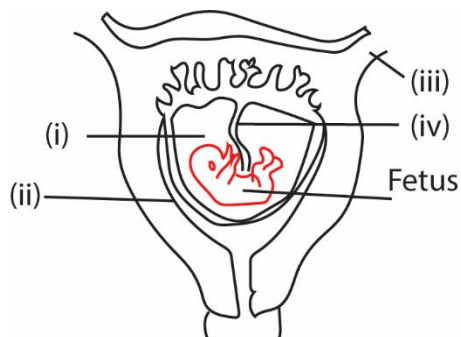
B.

(b) Give one function of C and one function of D

C. Transports nutrients f

D.

3. The following diagram shows reproduction in human beings. Use it to answer the questions that follow.



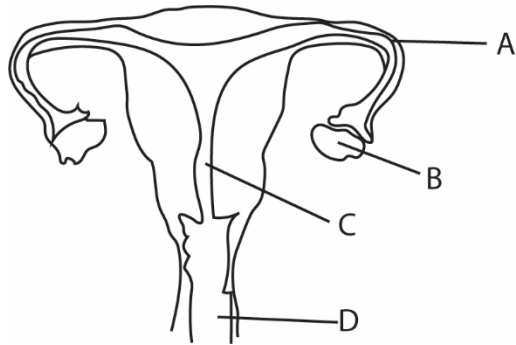
State functions of parts (i), (ii), (iii) and (iv).

(i)

(ii)

- (iii)
- (iv)

4. Name the parts of the reproductive system below



- A.
- B.
- C.
- D.

The table below shows the parts of female reproductive system and their functions. Complete the table correctly.

Parts pf female reproductive system	Functions of parts
	Where fertilization takes place
Ovary	
	The passage way of the baby
Uterus	

5. (a) What do you understand by family planning?

.....

.....

(b) Give two disadvantages of becoming a parent at an early age.

.....

.....

6. What is the advantage of family planning to a mother?

.....
.....

7. What is the purpose of marriage?

.....
.....

8. (a) What do you understand by adolescence?

.....
.....

(b) Name two secondary sex characteristic of adolescence.

.....
.....

(c) Give one disadvantage of pregnancy in adolescence

.....
.....

9. A married couple has 10 children. The oldest is 15 years while the youngest is 3months old.

(a) State two problems this family is likely to face.

.....
.....

(b) Mention one health problem the mother may face

.....
.....

(c) State one suitable advice you would give to this family.

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10. State some one major reason why breast milk is considered the best food for a bay?

.....
.....

11. What is weaning a child?

.....
.....

12. State one reason one reason why it is not advisable to have many children.

.....
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13. (a) Name one change that occur during adolescence in

(i) Male:

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.....

(ii) Female

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.....

(b)State two factors you consider when choosing a partner for marriage.

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14. (a) what is STDS?

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(b) Give two examples of STDS.

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(C) State one way in which STDs can be controlled.

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15. Why should a girl avoid teenage pregnancy?

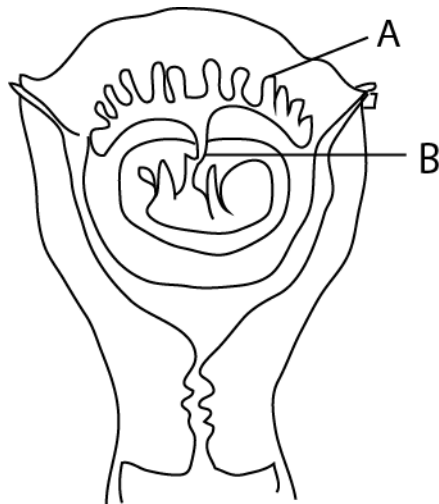
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16. Give one of the secondary sex characteristics that is common in both adolescent boys and girls.

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17. Suggest any one problem of early pregnancy to a school girl below 18 years.

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The diagram below a fetus in the womb. Use it to answer questions 18 and 19



18. Name the part marked with letter A

.....
.....

19. State any one way in which the part marked with letter B is useful to the fetus.

.....
.....

20. (a) Name the germ that cause HIV/AIDS.

.....
.....

(b) Apart from having sex with an infected person, write down two other ways in which one can get the germ that causes HIV/AIDS

.....
.....

(c) ABC is a way of controlling the spread of the germ that causes **HIV/AIDS** .what does **A** stand for?

.....
.....

21. Give one way in which the umbilical cord is important to the developing focus in the uterus.

.....
.....

22. (a) Mention two primary sex changes that happen in boys

(i).....

.....

(ii).....

.....

(b) Give two secondary sex changes which happen in both boys and girls

(i).....

.....

(ii).....

23. (a) Give any two reasons why it is important to wash hands before eating food.

(i).....

.....

(ii).....

.....

(b) Apart from washing, mention any two other activities one can do to maintain personal hygiene.

(i).....

.....

(ii).....

.....

24. Name one other disease caused by fungi in human s apart from ring worm.

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25. (a) Apart from ante –natal care, give two other ways of caring for pregnant women.

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(b) In which one ways should pregnant women protect their unborn babies from malaria?

.....

.....

(c) Why are pregnant women advised not to smoke?

.....

.....

26. Which sexually transmitted disease can cause blindness in babies?

.....

.....

27. Apart from production of eggs (ova), mention one other use of the ovaries in the human body.

.....

.....

28. (a) In the human reproductive system, state where each of the following processes take place:

- (i) Implantation: :
- (ii) Production of sperms:
- (iii) Production of female hormones:

(b) Give any one use of the placenta to the fetus during pregnancy

.....

.....

29. Name the fungal-caused sexually transmitted disease, which is spread through poor hygiene.

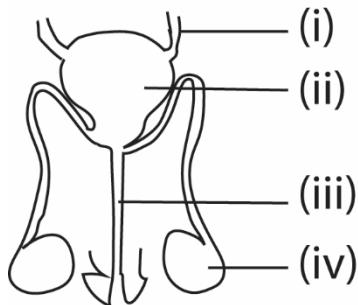
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30. State one effect of gonorrhea on the female reproductive system

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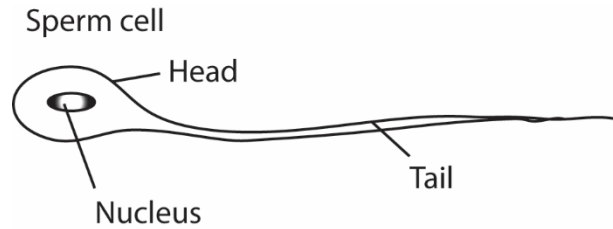
31. Give the name and functions of the parts of the male reproductive system below



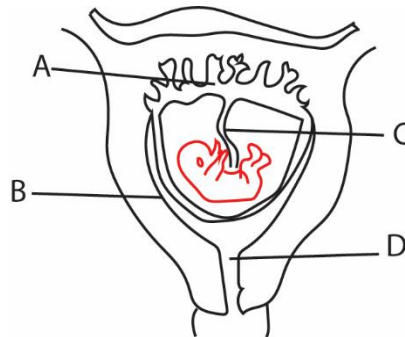
- (i)
- (ii)
- (iii)
- (iv)

Suggested answers

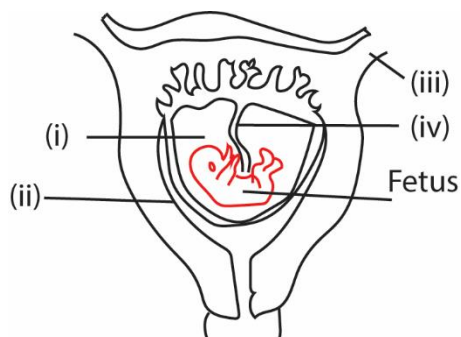
1. Draw a sperm in the space below:



2. The following diagram shows reproduction in human beings. Use it to answer the questions that follow



- (d) Name the parts A and B
- A. Placenta**
B. Uterus
- (e) Give one function of C and one function of D
- C. Transports nutrients form**
D. Cervix protects entrance of the uterus
3. The following diagram shows reproduction in human beings. Use it to answer the questions that follow.

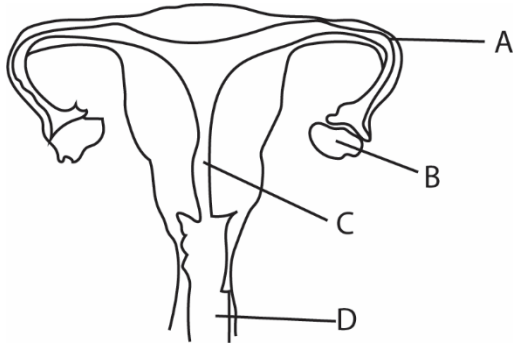


State functions of parts (i), (ii), (iii) and (iv).

- (i) Amniotic fluid protect the fetus from shock**

- (ii) **Uterus is where the fetus grows**
- (iii) **Oviduct is where fertilization takes place**
- (iv) **Umbilical cord transports nutrients from the mother to fetus**

4. Name the parts of the reproductive system below



- A. Oviduct/fallopian tube
- B. ovary
- C. uterus
- D. vagina

5. The table below shows the parts of female reproductive system and their functions. Complete the table correctly.

Parts pf female reproductive system	Functions of parts
Oviduct	Where fertilization takes place
Ovary	Produce ova Produces progesterone and estrogen
Vagina	The passage way of the baby
Uterus	It is where the fetus develops

6. (a) What do you understand by family planning?

The method whereby a couple chooses when to have children according to their income.

(b) Give two disadvantages of becoming a parent at an early age.

Drop out of school

Failure to look after one's children.

The child may not be ready for marriage

7. What is the advantage of family planning to a mother?

Prevents unwanted pregnancy

Leads to child spacing.

Allows the uterus to repair before the next pregnancy

8. What is the purpose of marriage?

Produce children

Provide protection and company

9. (a) What do you understand by adolescence?

Is a period between childhood and adulthood

(b) Name two secondary sex characteristic of adolescence.

Growth of pubic hair

Development of breasts in girls

Development of broad chest in boys

(c) Give one disadvantage of pregnancy in adolescence

- **Lead to school drop out**

- **Giving birth may be a problem leading to death of mother and a child**

- **Attempted abortion may lead to death**

- **Failure to support the baby**

10. A married couple has 10 children. The oldest is 15 years while the youngest is 3 months old.

(a) State two problems this family is likely to face.

Lack of enough food

Lack of proper medication

Congestion in a house

(b) Mention one health problem the mother may face

Mother's uterus may be destroyed

Premature birth

Mother's death

Maternal anemia

(c) State one suitable advice you would give to this family.

Should join family planning

11. State some one major reason why breast milk is considered the best food for a baby?

Contains all food nutrients needed by the child

12. What is weaning a child?

Is a process of making a baby get used to other foods while breast feeding.

State one reason one reason why it is not advisable to have many children.

It may be difficult to care for them

13. (a) Name one change that occur during adolescence in

(iii) Male: - **pubic hairs**
- **Deep voice**

(iv) Female - **pubic hairs**
- **smooth voice**
- **growth of breasts**

(b) State two factors you consider when choosing a partner for marriage.

Attractiveness

Behavior

Education

Religion

culture

14. (a) What is STDS?

Sexually transmitted diseases

(b) Give two examples of STDS.

Gonorrhea

Syphilis

Candidiasis

(C) State one way in which STDs can be controlled.

Abstinence

Being faithful to some one's partner

Use of a condom

15. Why should a girl avoid teenage pregnancy?

Teenage pregnancy lead to drop out of school

Teenage pregnancy may lead to fistula

May lead to obstructed delivery.

May lead to failure to look after the baby properly

16. Give one of the secondary sex characteristics that is common in both adolescent boys and girls.

Growth of pubic hair

Sweat gland become more active

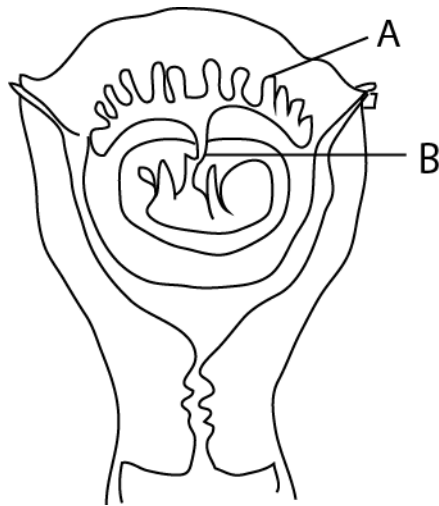
Growth of hair in the armpit



17. Suggest any one problem of early pregnancy to a school girl below 18 years.

- lead to drop out of school
- girls may die while giving birth
- girl are likely to abort because they are not prepared for pregnancy

The diagram below a fetus in the womb. Use it to answer questions 16 and 17



18. Name the part marked with letter A

Placenta

19. State any one way in which the part marked with letter B is useful to the fetus.

B the umbilical cord:

- Conduct nutrients and oxygen to the fetus
- takes away carbon dioxide and waster products from the fetus

20. (a) Name the germ that cause HIV/AIDS.

Virus, HIV

(b) Apart from having sex with an infected person, write down two other ways in which one can get the germ that causes HIV/AIDS

(i) From mother to child at birth

(ii) Sharing sharp objects

(iii) Circumcision

(c) ABC is a way of controlling the spread of the germ that causes **HIV/AIDS** .what does **A** stand for?

Abstinence from sex.

21. Give one way in which the umbilical cord is important to the developing fetus in the uterus.

Transports food nutrients from mother to fetus

Removes waste products from the fetus to the mother

Transports oxygen from the mother to the fetus

22. (a) Mention two primary sex changes that happen in boys

(i) Voice deepens

(ii) Start to produce sperms

(b) Give two secondary sex changes which happen in both boys and girls

(i) Growth of pubic hair

(ii) Growth of hair in armpit

23. (a) Give any two reasons why it is important to wash hands before eating food.

(i) To remove dirt

(ii) To remove germs

(b) Apart from washing, mention any two other activities one can do to maintain personal hygiene.

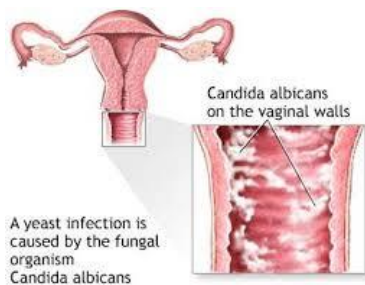
(i) mopping a house

(ii) brushing teeth

(iii) Washing the body

24. Name one other disease caused by fungi in humans apart from ring worm.

Candida



oral thrush



Dhobie's itch



25. (a) Apart from ante –natal care, give two other ways of caring for pregnant women.

- (i) **Provide a balance diet**
- (ii) **Show them love**
- (iii) **Give them enough rest**
- (iv) **Give appropriate dressing**

(b) In which one ways should pregnant women protect their unborn babies from malaria?

- (i) **Take antimalarial like Fansidar**
- (ii) **Sleep in mosquito treated nets**
- (iii) **Use mosquito repellent**

(c) Why are pregnant women advised not to smoke?

- (i) **To avoid premature death**
- (ii) **Avoid lung cancer**
- (iii) **Avoid still birth**

26. Which sexually transmitted disease can cause blindness in babies?

Gonorrhea

27. Apart from production of eggs (ova), mention one other use of the ovaries in the human body.

Ovary produce hormones such as estrogen and progesterone

28. (a) In the human reproductive system, state where each of the following processes take place:

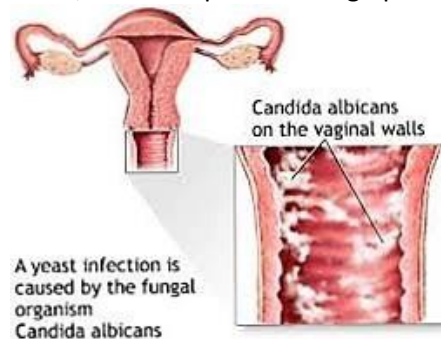
- (i) Implantation: : **uterus**
- (ii) Production of sperms: **testis**
- (iii) Production of female hormones: **ovaries**

(b) Give any one use of the placenta to the fetus during pregnancy

- **Supplies food, oxygen, hormones**
- **prevent disease germs from reaching the fetus**
- **Attachment of the fetus to the mother**
- **To deliver carbon dioxide and wastes from the fetus**

29. Name the fungal-caused sexually transmitted disease, which is spread through poor hygiene.

Candidiasis/ thrust



30. State one effect of gonorrhea on the female reproductive system

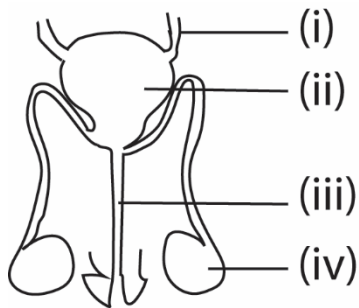
Increased **vaginal discharge**.

Painful **urination**.

Vaginal bleeding between periods, such as after vaginal intercourse.

Abdominal or pelvic **pain**.

31. Give the name and functions of the parts of the male reproductive system below



(i) Ureter transports urine from the kidney to the bladder

(ii) Urinary bladder stores urine

(iii) Urethra transport urine and sperms outside

(iv) Testis produce sperms and male hormones