

## Exam questions page 137

### Multiple choice

- D
- A
- B
- B
- A

### One word items

1. Puberty
2. Condom
3. Copulation/Coitus
4. Cervix
5. Urethra

### Contextual questions

1.1 Which product is advertised here?

**A condom**

1.2 Who is the target market of this advertisement?

**Men that are sexually active and who do not want to become fathers.**

1.3 Name two things that this product can prevent.

**Pregnancy**

**Sexually transmitted diseases, e.g. HIV/aids**

1.4 Explain point by point how this product must be used.

- **Carefully open the condom wrapper. Do not tear it or open it with your teeth or use scissors to cut it open.**
- **Place the condom at the top of the hardened penis.**
- **Pinch the air out of the tip of the condom by using your fingers.**
- **Carefully unroll the condom to the bottom of the penis.**
- **After sexual intercourse, hold the condom at the bottom before the penis is pulled out.**
- **Carefully take off the condom and throw it in the trash.**

1.5 Is this product 100% effective? Give two reasons to support your answer.

**No**

**If condoms are not used correctly, it may be ineffective.**

**Condoms may break or tear during sexual intercourse.**

**Condoms that are used after the expiry date, may be ineffective.**

**(any two suitable reasons)**

1.6 Name two other products that serve the same purpose as the product that is advertised.

**Contraceptive pill**

**Diaphragm**

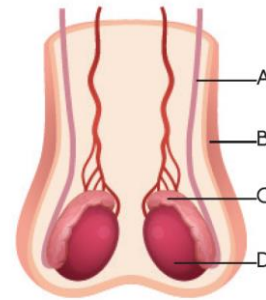
**IUD**

**(any two)**

2 Carefully study the following sketch before you answer the questions:

2.1 What is depicted in this sketch?

**The scrotum that contains the testicles.**



2.2 Give the labels of A–D.

**A – vas deferens**

**B – scrotum**

**C – epididymis**

**D – testicle**

2.3 Where on the human body is this structure found?

**In the crotch under the penis**

2.4 Give a reason for your answer to Questions 2.3 regarding the positioning of this structure.

**The testicles produce sperm optimally at a temperature lower than body temperature.**

**That is why the scrotum with the testicles are found on the outside of the body.**

2.5 What is the function of C?

**It stores sperm while the sperm ripens.**

2.6 What is the function of B?

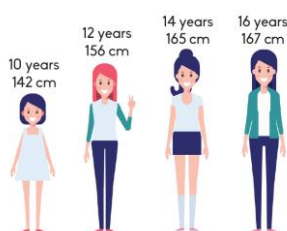
**It controls the temperature of the testicles.**

2.7 B contains a muscle layer. Why is it necessary for B to have this muscle layer?

**The temperature of the testicles needs to be controlled. The muscle layer in the scrotum allows the scrotum to contract or relax. Thus, if the temperature of the testicles is too cold, the scrotum will contract to pull the testicles closer to the body. The temperature of the testicles will then rise. If the temperature of the testicles is too hot, the scrotum will relax and the testicles will be further away from the body. The temperature of the testicles will then decrease.**

2.8 Name two things that are produced by D.

**Sperm cells and testosterone**



3.1 Which phase in a person's life is depicted in the picture above?

**Puberty**

3.2 On average, at which age does this phase start in girls?

**Between 10 and 14**

3.3 Which hormone plays an important part during this phase of a girl's life?

**Oestrogen**

3.4 Why is it important for girls' hips to become broader during this phase?

**It is to prepare her body for possible pregnancy and to give birth.**

3.5 Name two other outward changes that can be observed in girls' bodies during this phase.

**An increase in height**

**Breasts enlarge.**

**Hair starts to grow in the armpits and around the genitalia.**

**(Any two physical changes that can be seen with the naked eye.)**

3.6 Fully explain the process of ovulation.

**Once a month the ovaries release an ovum.**

**The ovum is released into the Fallopian tube.**

**The lining of the uterus becomes thicker and the blood vessels increase.**

**The ovum moves through the Fallopian tube to the uterus. The ovum is now ready for fertilisation.**

3.7 Which process follows ovulation if fertilisation does not take place?

**Menstruation**

4.1 In which part of the female body does the foetus develop?

**In the uterus**

4.2 How is the foetus connected to the placenta?

**Through the umbilical cord**

4.3 Give the labels for A and B.

**A – urethra**

**B – vagina**

4.4 Give the functions of A and B.

**Function of A:**

**Transports urine to the outside of the body.**

**Functions of B:**

**Receives the penis and sperm cells during sexual intercourse. It is the opening through which babies are born, and menstrual blood is excreted.**

5.1 Briefly explain what infertility is.

**Infertility is the inability of a man or woman to reproduce.**

5.2 Which group of men is most likely to reproduce? Give a reason for your answer.

**Group 1**

**The higher a man's sperm count, the more likely that one of his sperm cells will fertilise an egg cell. Group 1's men has the highest sperm count, and that is why they are the most likely group to reproduce.**

5.3 Give two reasons why the men in Group 1 have a higher sperm count than the men in Group 2 and Group 3.

**They bath in colder water than the men of the other two groups.  
They exercise more frequently than the men in the other two groups.**

5.4 Why does the temperature of the men's bath water play a role in their sperm count?

**Sperm cells are optimally produced at a temperature a little lower than body temperature. When the bath water is too hot, the testicles are exposed to a temperature that is too high and sperm production will decrease.**

5.5 Will warm bath water have the same effect on women as on men? Give a reason for your answer.

**No**

**When a woman is born, all her egg cells are already produced, but not yet released. Therefore, temperature will not have an influence on the egg cells.**

5.6 Why will men who wear loose-fitting underwear most likely have a higher sperm count than men who wear tight-fitting underwear?

**Sperm cells are optimally produced at a temperature lower than body temperature. When men wear tight-fitting underwear, their testicles are pressed against their bodies. This increases the temperature of the testicles and influences the production of sperm cells.**

5.7 Give two other factors that may have the same effect on a man's sperm count as when he baths in water that is too hot.

**Wear underwear that is too tight.  
Keep laptops on your lap for too long a period.  
Carry your cell phone in your front pocket.  
(Any two suitable answers where the testicles' temperature is unnaturally increased.)**

5.8 Which two human cells have to fuse before a woman can become pregnant?

**Sperm cell (male) and egg cell (female)**

5.9 Name three other reasons that are not shown on the graph that can cause a man to have a low sperm count.

**Underwear that is too tight.  
Laptops that are kept on your lap too regularly and for long periods of time.  
Underfeeding  
Too much exposure to cigarette smoke  
A lot of stress and depression  
Testes that do not descend before puberty.  
Certain viral diseases such as mumps  
(any three suitable answers)**

5.10 Are any of these men impotent? Give reasons for your answer by including an explanation of what impotence is.

**No**

**Impotence means that no sperm is made available during ejaculation.**

**All three groups of men made sperm cells available during ejaculation.**

6 Give a short explanation of the meaning of the following concepts:

6.1 Gametes

**Male or female gender cell**

6.2 Ejaculation

**Semen is released from the penis.**

6.3 Testosterone

**It is the male sexual hormone.**

6.4 Hypophysis

**The pituitary gland situated at the bottom of the brain that releases hormones into the bloodstream.**

6.5 Foetus

**An unborn baby**

6.6 Sterilisation

**A medical procedure performed on a man or woman to prevent them from being able to reproduce.**

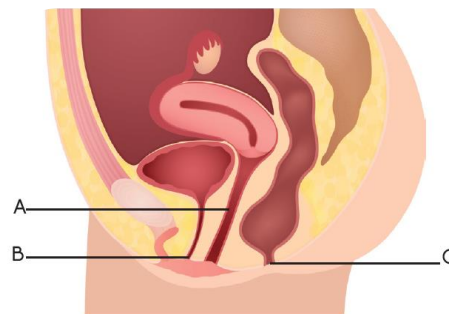
7 Study the following sketch:

7.1 Give labels for A, B and C.

**A – Vagina**

**B – Urethra**

**C – anus**



7.2 Name three functions of A.

**It receives the penis and sperm cells during sexual intercourse.**

**It is the channel through which babies are born.**

**It is the opening through which menstrual blood is excreted.**

7.3 Give a description of A.

**It is a tube with muscular walls which connects the inner and outer genitals.**

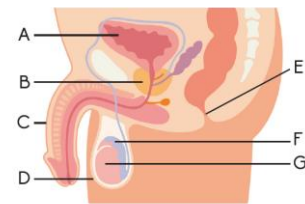
7.4 What does part B and part C have in common?

**Both excrete waste products from the body.**

7.5 To which organ in the human body is B connected?

**The bladder**

8 The following sketch of the male reproductive system is given:



8.1 Give three functions of C.

**It excretes urine.**

**It excretes semen.**

**It is the male organ which makes sexual intercourse possible.**

8.2 Give the labels of A, B and E.

**A – bladder**

**B – prostate gland**

**C – anus**

8.3 Fully describe B.

**It is a conical gland that consists of three lobes**

8.4 Which part of the reproductive system has to be held at a certain temperature? Only give the letter.

**G**

8.5 Give a full description of D.

**It is a bag of skin found in the crotch. It consists of wrinkled skin and the bottom layer contains muscles.**

8.6 Explain point by point what happens to the penis during an erection.

- **The penis is filled with sponge tissue.**
- **When sexually stimulated, blood starts to flow to the penis.**
- **The sponge tissue is filled with blood, which leads to the penis becoming hardened, longer and thicker.**

8.7 Which two parts of the male reproductive system is mostly prone to cancer? Only give the letters.

**B and D**

9 The following diagram shows the course of a standard menstrual cycle:

9.1 How many days are there in a standard menstrual cycle?

**28**

9.2 What happens during the ovulation period?

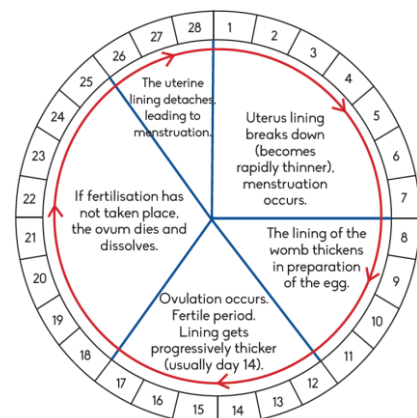
**One ripe ovum (egg cell) is released by the ovaries.**

9.3 Why is this period known as a woman's fertile period?

**An egg cell has to be available before fertilisation can take place.**

**During ovulation an egg cell is available, but no egg cell is available to be fertilised during the rest of the month.**

**This is why this time is referred to as the fertile period.**



9.4 Why are men's fertile period not limited to a certain amount of days per month?

**Men can produce sperm cells any day of the month.**

**Therefore, men's fertility is not limited to a certain period.**

9.5 During which days of the 28-day cycle does menstruation take place?

**Days 1–7**

9.6 Why is menstruation sometimes accompanied by severe pain?

**The thickened lining of the uterus tears loose.**

**The muscles of the uterus contract.**

9.7 What happens to the egg cell if it is not fertilized?

**It dies off and dissolves.**

9.8 Which products can be used to absorb the blood during menstruation?

**Sanitary towels, tampons or menstrual cup**

9.9 Which part of the female reproductive system releases the egg cell?

**Ovaries**

10 Study the following sketch and answer the questions that follow:

10.1 What is depicted in this sketch?

**The female reproductive system**

10.2 Which number is the tube through which urine is excreted?

**4**

10.3 In which number will a foetus grow and develop?

**2**

10.4 By looking at the sketch, why do you think pregnant

women usually have to urinate more than women who are not pregnant?

**The uterus is situated right above the bladder. As the foetus grows, the uterus takes up more space in the female body, and there is less space for the bladder. Thus, the bladder cannot contain as much urine as before, and a pregnant woman therefore has to urinate more often.**

10.5 Give the labels of numbers 1 and 5.

**1 – Fallopian tube**

**5 – Ovary**

10.6 What is the function of number 1?

**The Fallopian tube transports the egg cell from the ovary to the uterus.**

10.7 Give a complete description of number 5.

**The ovaries are almond-shaped glands that are situated on either side of the uterus.**

