

Human reproduction: practice questions

7 questions • 22 marks • mark scheme at the back

For Pearson Edexcel International GCSE Biology 4BI1 and Science (Double Award) 4SD0. **Biology only** is not in the Double Award and is only examined on Paper 2.

Name

Total / 22

1 Where does fertilisation usually take place in a woman? [1 mark]

- A. ☐ Ovary
- B. ☐ Oviduct
- C. ☐ Cervix
- D. ☐ Vagina

2 Describe the functions of the testes, the sperm duct and the prostate gland. [3 marks]

3 State the roles of oestrogen and progesterone in the menstrual cycle. [2 marks]

4 **Biology only** [3 marks]

Describe the roles of FSH and LH in the menstrual cycle.

5 Explain how the placenta provides for the needs of the developing embryo, and how the amniotic fluid protects it. **[4 marks]**

[illegible]

6 Name one hormone that causes secondary sexual characteristics in boys and state two changes it causes. **[3 marks]**

[illegible]

7 Describe the changes to the lining of the uterus during one menstrual cycle and explain how oestrogen and progesterone control these changes. **[6 marks]**

[illegible]

Mark scheme

One mark for each point unless a maximum is given. Words in brackets are not needed for the mark.

1. [1]

B B (1)

2. [3]

- testes make sperm / testosterone (1)
- sperm duct carries sperm (to the urethra) (1)
- prostate gland adds fluid / nutrients to the sperm (to make semen) (1)

3. [2]

- oestrogen repairs / builds up the lining of the uterus (1)
- progesterone maintains the lining of the uterus (1)

4. [3] **Biology only**

- FSH causes an egg to mature (in the ovary) (1)
- FSH stimulates the ovaries to make oestrogen (1)
- LH causes ovulation / release of the egg (1)

5. [4]

- oxygen and nutrients (glucose / amino acids) diffuse from the mother's blood into the embryo's blood (1)
- carbon dioxide and urea diffuse from the embryo's blood into the mother's blood (1)
- villi give a large surface area for diffusion (1)
- amniotic fluid absorbs shocks / cushions the embryo against knocks (1)
- mother's and embryo's blood are close together but do not mix (1)
- Max 4

6. [3]

- testosterone (1)
- one change from: facial hair grows / voice deepens / muscles develop / shoulders broaden / pubic hair grows / sperm production begins (1)
- a second, different change from the same list (1)

7. [6]

Level 3 5-6	A clear and accurate description of the lining breaking down, being repaired and then maintained, with the roles of both oestrogen and progesterone correctly linked to these stages and the timing included.
Level 2 3-4	Some accurate description of the changes and at least one hormone correctly linked, but the answer may lack detail or timing.
Level 1 1-2	A few simple statements about the cycle, with little or no link to the hormones.

Indicative content

- menstruation: the lining breaks down and is lost through the vagina, about days 1 to 5
- repair: the lining is repaired and thickens, about days 5 to 14
- oestrogen is made in the ovaries and causes the repair and growth of the lining
- ovulation around day 14: an egg is released
- maintenance: the lining stays thick, about days 14 to 28
- progesterone is made in the ovaries and maintains the lining
- if there is no pregnancy the progesterone level falls, so the lining breaks down and a new cycle begins