

16. Reproduction

16.5 Sexual hormones in humans

Paper 1 and 2

Question Paper

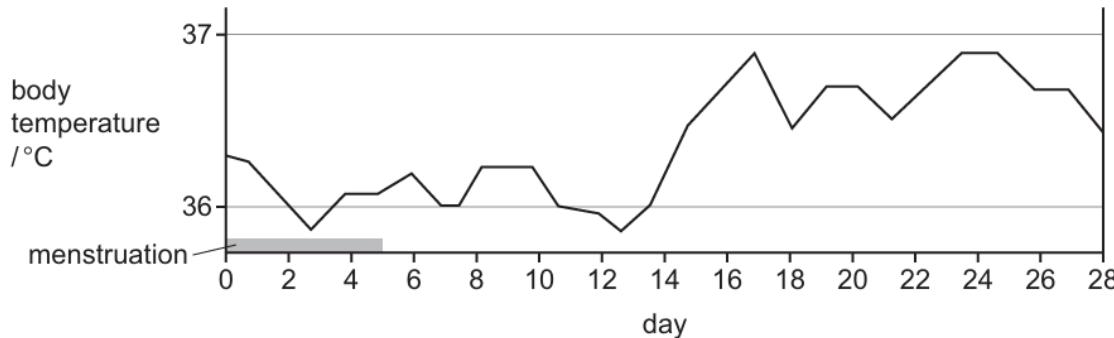
Paper 1

Questions are applicable for both core and extended candidates

- 1 Which secondary sexual characteristic is caused by both testosterone and oestrogen?
 - A breast development
 - B changes in body shape
 - C growth of facial hair
 - D sudden deepening of voice

- 2 Which hormone causes the development of secondary sexual characteristics in human males?
 - A adrenaline
 - B insulin
 - C progesterone
 - D testosterone

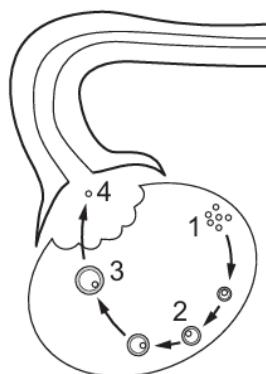
- 3 The graph shows a woman's body temperature during the menstrual cycle.



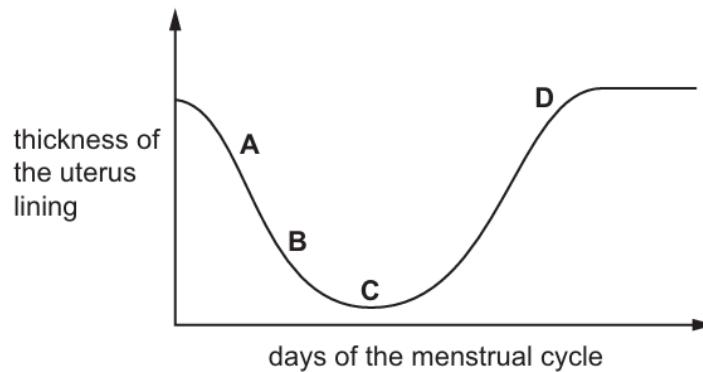
On which days is the woman **most** likely to become pregnant?

- A days 0–5
- B days 6–12
- C days 13–18
- D days 19–28

4 The diagram shows changes in the ovary.



Which point represents the thickness of the uterus lining when the ovary is at stage 4?



5 What causes the development of female secondary sexual characteristics?

- A adrenaline production
- B menstrual cycle starting
- C oestrogen production
- D ovulation occurring

6 What happens to the uterus lining during menstruation?

- A breaks down
- B new blood vessel growth
- C implantation of embryo
- D repair and thickening

7 When do the following stages occur in a typical human menstrual cycle?

	bleeding	ovulation
A	days 13 – 14	days 6 – 25
B	days 1 – 4	days 27 – 28
C	days 6 – 25	days 1 – 4
D	days 1 – 4	days 13 – 14

8 The table shows the percentage effectiveness of four methods of contraception when used correctly.

method	percentage effectiveness
male condom	98
diaphragm	94
femidom	95
vasectomy	99

What would be the expected percentage of unplanned pregnancies if the surgical method of contraception was used?

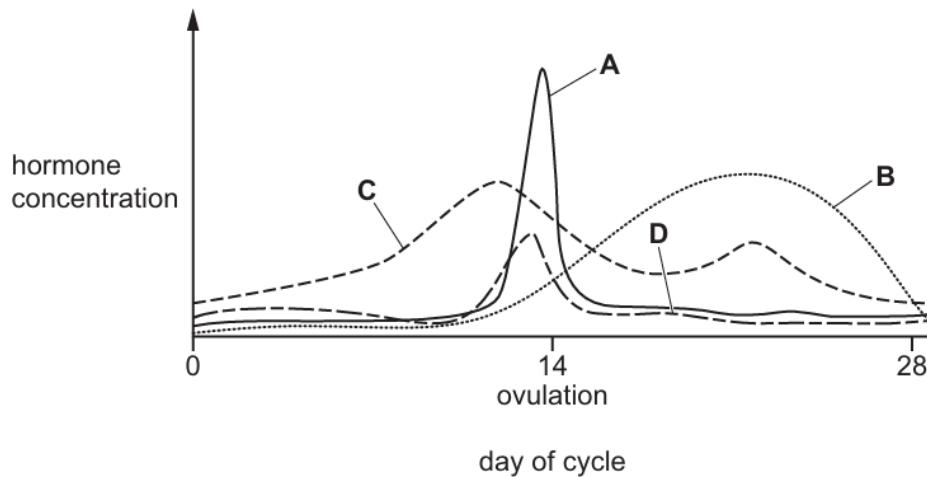
A 1% **B** 2% **C** 5% **D** 6%

Paper 2

Questions are applicable for extended candidates only

9 The graph shows the concentration of four hormones during the menstrual cycle.

Which line represents progesterone? (extended only)



10 Which hormone maintains the thickness of the lining of the uterus during pregnancy? (extended only)

- A follicle-stimulating hormone (FSH)
- B luteinising hormone (LH)
- C oestrogen
- D progesterone

11 Where is oestrogen produced? (extended only)

- A cervix
- B ovaries
- C oviducts
- D uterus

12 Which hormones are released by the placenta during pregnancy? **(extended only)**

- A FSH and LH
- B FSH and progesterone
- C oestrogen and LH
- D progesterone and oestrogen

13 Which hormone stimulates the release of an egg from the ovary during the menstrual cycle? **(extended only)**

- A FSH
- B LH
- C oestrogen
- D progesterone

14 Which hormone causes the lining of the uterus to become thick and glandular before ovulation? **(extended only)**

- A adrenaline
- B FSH
- C oestrogen
- D progesterone

15 There are many reasons why a woman does not become pregnant.

What can be treated by a drug that increases the secretion of FSH? **(extended only)**

- A inactive sperm
- B follicles not developing
- C thin uterine lining
- D too few sperm