

GCSE Biology (9 – 1)

The Menstrual Cycle

Name:

Group:

Instructions

- Read each question carefully before you begin to answer it.
- Use black ink or black ball-point pen for your answers.
- Fill in the boxes at the top of this page with your name and group.
- Attempt to answer every question in the booklet.
- Answer the questions in the spaces provided – there may be more space than you need in some answer spaces.
- Calculators may be used for this booklet.
- For any calculations, you **must** show all your working.
- Any and all drawings or graphs should be completed in pencil.



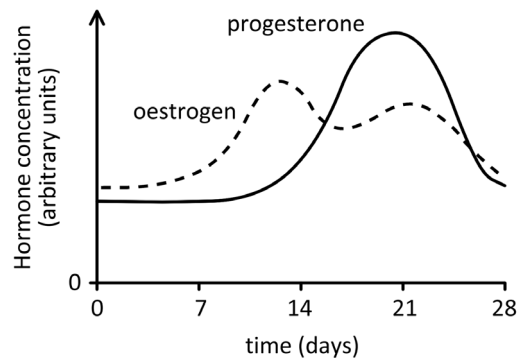
For markers use	
Question	Mark
1	/4
2	/10
3	/13
Total	/27
%	
Grade	

Information

- The maximum mark for this paper is 27 marks.
- The marks for each question are shown in brackets.
- Please be aware that good English and clear presentation are required in your answers.



1. The menstrual cycle is the natural regular change that occurs in the reproductive system of a female that allows the uterus to support a pregnancy. Circle the letter of each correct answer.
- a) The figure below shows some of the hormonal changes which take place during the menstrual cycle.

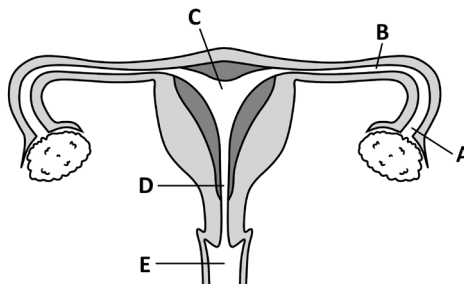


If we assume that ovulation happens on day 14, in terms of hormones, what is happening just after ovulation?

- A** An increase in concentration of oestrogen only.
- B** A decrease in concentration of progesterone only
- C** A decrease in concentration of oestrogen and progesterone.
- D** An increase in concentration of progesterone and a decrease in concentration of oestrogen.

(1 mark)

- b) The figure below shows the female reproductive system.



At which location is an ovum released during ovulation?

- A** **B** **C** **D** **E**

(1 mark)

- c) Which of the following hormones is primarily responsible for the thickening of the endometrium during the first half of the menstrual cycle?

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|-----------------------------|---------------------------------------|-----------|--------------|
| A | B | C | D |
| Luteinizing hormone
(LH) | Follicle-stimulating
hormone (FSH) | Oestrogen | Progesterone |

(1 mark)

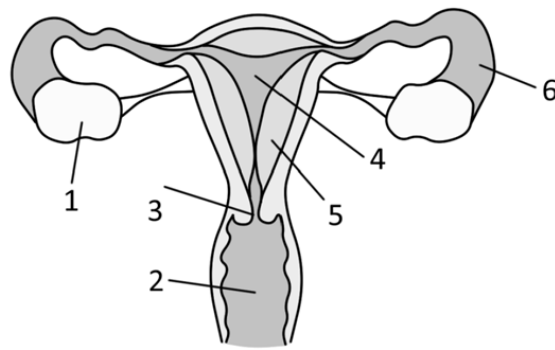
- d) Ovulation is triggered by a surge in the levels of which hormone?

- | | | | |
|-----------------------------|---------------------------------------|-----------|--------------|
| A | B | C | D |
| Luteinizing hormone
(LH) | Follicle-stimulating
hormone (FSH) | Oestrogen | Progesterone |

(1 mark)

(Total for Question 1 is 4 marks)

2. The figure below shows a section through the uterus of a human female.



a) Identify the structures labelled 1 to 6.

1. 2.
3. 4.
5. 6.

(3 marks)

b) Name **two** hormones produced by the pituitary gland that play a significant role in the menstrual cycle.

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(2 marks)

The female contraceptive pill contains hormones to prevent pregnancy.

c) Explain how the hormones in contraceptive pills prevent ovulation.

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(3 marks)

d) Explain how barrier contraceptives prevent pregnancy.

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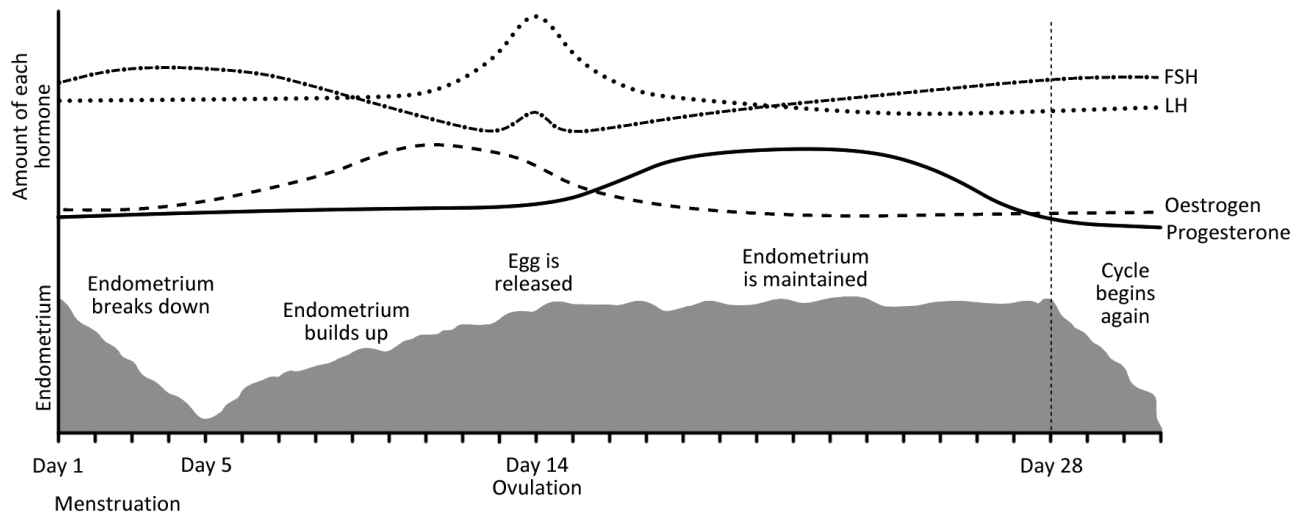
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(2 marks)

(Total for Question 2 is 10 marks)

3. The figure below shows the hormones of the menstrual cycle.



a) Explain how **two** of the hormones shown in the figure above cause ovulation.

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(4 marks)

b) Describe the role of oestrogen in the menstrual cycle.

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(2 marks)

c) State where oestrogen is produced in the body?

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(1 mark)

d) Explain the function of progesterone after ovulation.

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(2 marks)

e) Explain how the levels of each hormone from the figure above would be different in a pregnancy.

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(4 marks)

(Total for Question 3 is 13 marks)