AQA GCSE Biology | 8461

SPECIFICATION POINT 4.5.3.4

Hormones in human reproduction

Past-paper questions

Tier	**Foundation**
Question groups	**10**
Available paper years	**2007–2023**

Using this booklet

1. Answer the questions in order and show your working.
2. Original question numbers and marks are retained.
3. Print at actual size (100%) for measuring questions.
4. Use the companion answer booklet to check your work.

Name: _____ **Date:** _____

Whole questions are retained for context, so some parts assess other specification points. Current and legacy sources are labelled. Continue on extra paper if needed.

4.5.3.4 Hormones in human reproduction

Question 01

June 2007 | BLY1A | Original Q4 | Legacy

QUESTION FOUR

Hormones are involved in the menstrual cycle.

Match words, **A**, **B**, **C** and **D**, with the numbers **1–4** in the sentences.

A eggs

B ovaries

C pituitary gland

D womb

FSH is produced by the . . . **1** . . . .

FSH causes . . . **2** . . . to mature.

Oestrogen is produced by the . . . **3** . . . .

In IVF, embryos are inserted into the mother's . . . **4** . . . .

4.5.3.4 Hormones in human reproduction

Question 02

June 2010 | BLY1AP | Original Q5 | Legacy

QUESTION FIVE

The menstrual cycle is controlled by hormones.

Match words, **A**, **B**, **C** and **D**, with the statements **1–4** in the table.

A embryo

B ovary

C pituitary gland

D womb

	Information
1	produces eggs
2	produced when a fertilised egg divides
3	produces the hormone FSH
4	its lining is thickened by the action of a hormone

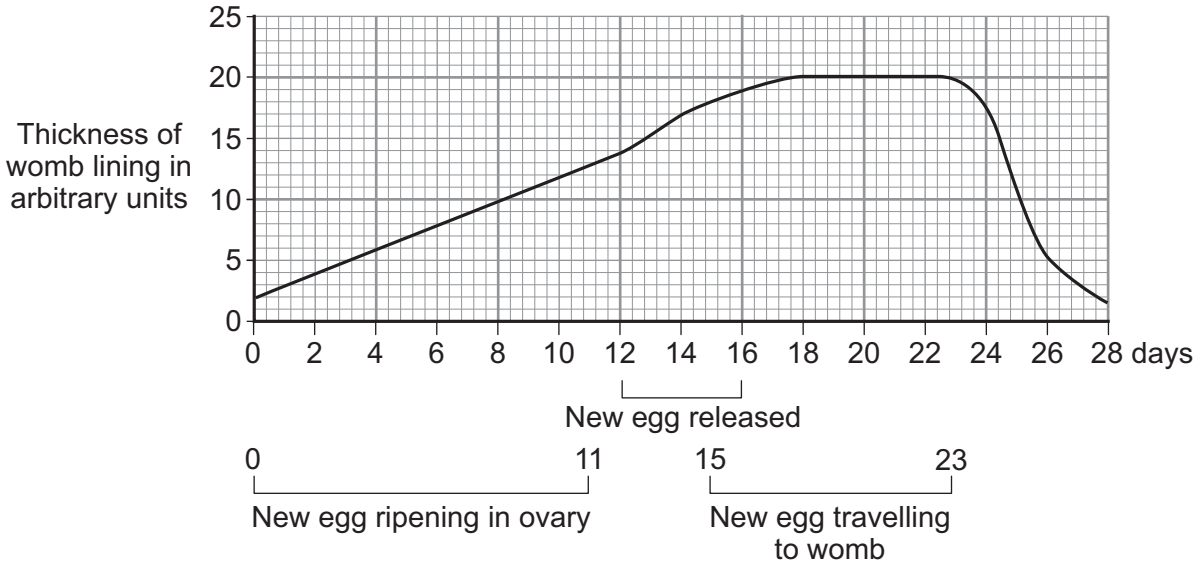
4.5.3.4 Hormones in human reproduction

Question 03

November 2010 | BLY1AP | Original Q4 | Legacy

QUESTION FOUR

The graph shows changes in the thickness of the womb lining during a woman's menstrual cycle.



Match numbers, **A**, **B**, **C** and **D**, with the statements **1–4** in the table.

A 5

B 11

C 15

D 28

1	a day when a new egg could be released
2	the number of days the womb lining takes to break down
3	the number of days the new egg takes to ripen
4	a day when the womb lining is thinnest

4.5.3.4 Hormones in human reproduction

Question 04

March 2011 | BLY1AP | Original Q5 | Legacy

QUESTION FIVE

We control conditions inside our bodies.

Match organs, **A**, **B**, **C** and **D**, with the statements **1**–**4** in the table.

A liver

B pituitary gland

C kidney

D skin

1	produces the hormone FSH
2	gets rid of excess heat
3	removes excess water from the blood
4	produces cholesterol

4.5.3.4 Hormones in human reproduction

Question 05

June 2011 | BLY1AP | Original Q5 | Legacy

QUESTION FIVE

This question is about human organs.

Match organs, **A**, **B**, **C** and **D**, with the functions **1**–**4** in the table.

A kidney

B liver

C ovary

D pituitary gland

	Function
1	produces cholesterol
2	produces FSH
3	produces oestrogen
4	produces urine

4.5.3.4 Hormones in human reproduction

Question 06

June 2011 | BLY1F | Original Q6 | Legacy

6 Hormones control the menstrual cycle.

6 (a) Name **two** of the hormones involved in the menstrual cycle.

1 .....

2 .....

(2 marks)

6 (b) Hormones are used in some types of contraception.

Complete the sentence.

When used as contraceptives, hormones stop ..... becoming mature.

(1 mark)

6 (c) There are several ways of using hormones as contraceptives.

These include:

- taking a contraceptive pill each day for 21 days of the menstrual cycle
- using a contraceptive implant.

The contraceptive implant is put under the skin of a woman's arm.

The implant releases contraceptive hormones for three years before the implant needs to be replaced.

6 (c) (i) Suggest **one** advantage of using this implant rather than taking contraceptive pills.

.....

.....

(1 mark)

6 (c) (ii) Suggest **one** disadvantage of using this implant rather than taking contraceptive pills.

.....

.....

(1 mark)

5

4.5.3.4 Hormones in human reproduction

Question 07

June 2016 | BL1FP | Original Q4 | Legacy

4 Hormones are involved in controlling the menstrual cycle and fertility.

4 (a) (i) Use the correct answer from the box to complete the sentence.

[1 mark]

auxin	**follicle stimulating hormone (FSH)**	**thalidomide**

A hormone produced by the pituitary gland is _____ .

4 (a) (ii) Use the correct answer from the box to complete the sentence.

[1 mark]

luteinising hormone (LH)	**oestrogen**	**statin**

A hormone produced by the ovaries is _____ .

4 (b) (i) Why are fertility drugs given to some women?

[1 mark]

_____

_____

4 (b) (ii) A doctor injects fertility drugs into a woman. After the injection, the hormones travel to the woman's ovaries.

How do the hormones travel to the ovaries?

[1 mark]

Draw a ring around the correct answer.

through the bloodstream **through the neurones** **through the skin**

4 (c) Which **two** hormones are used in contraceptive pills?

[2 marks]

Tick (✓) **two** boxes.

FSH	☐	oestrogen	☐
LH	☐	progesterone	☐

6

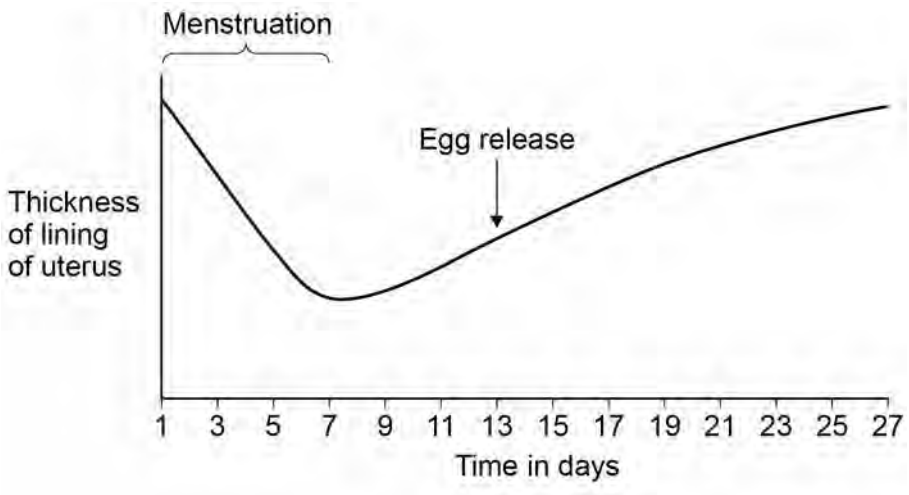
4.5.3.4 Hormones in human reproduction

Question 08

June 2018 | 8461/2F | Original Q2

0 2 **Figure 2** shows some changes that occur during the menstrual cycle.

Figure 2



0 2 . 1 **Figure 2** shows that the lining of the uterus thickens between days 7 and 27.

What is the purpose of thickening the lining of the uterus?

[1 mark]

Tick **one** box.

To allow implantation of the embryo ☐

To break down waste ☐

To prevent sperm reaching the egg ☐

0 2 . 2 Which hormone causes thickening of the lining of the uterus?

[1 mark]

Tick **one** box.

Auxin ☐

Oestrogen ☐

Testosterone ☐

4.5.3.4 Hormones in human reproduction

Question 08 · continued

0 2 . 3 On which day is fertilisation most likely to occur?

Use information from **Figure 2**.

[1 mark]

Contraception can be used to lower the chance of pregnancy.

0 2 . 4 Draw **one** line from each method of contraception to how the method works.

[3 marks]

Method of contraception	How the method works
Contraceptive pill	Barrier to prevent sperm reaching the egg
Diaphragm	Contains hormones to stop eggs maturing
Spermicidal cream	Kills sperm
	Slows down sperm production

Question 2 continues on the next page

4.5.3.4 Hormones in human reproduction

Question 08 · continued

0 2 . 5 **Table 2** gives information about some different methods of contraception.

Table 2

Method	Number of pregnancies per 100 women in one year	Possible Side effects
Diaphragm and spermicidal cream	8	Usually none, but can cause bladder infection in some women
Condom	2	None
Contraceptive pill	1	Mood swings, headaches, high blood pressure, blood clots, breast cancer

A man and a woman decide to use the condom as their method of contraception.

Suggest **three** reasons for this decision.

Use information from **Table 2** and your own knowledge.

[3 marks]

1 _____

_____

2 _____

_____

3 _____

_____

9

4.5.3.4 Hormones in human reproduction

Question 09

June 2022 | 8461/2F | Original Q5

0 5 In the human female, an egg is released from one of the ovaries about once every four weeks.

During the four weeks, the lining of the uterus thickens and then breaks down.

This is called the menstrual cycle.

0 5 . 1 Which **two** hormones are female reproductive hormones?

[2 marks]

Tick (✓) **two** boxes.

- Adrenaline ☐
- Oestrogen ☐
- Progesterone ☐
- Testosterone ☐
- Thyroxine ☐

0 5 . 2 Follicle stimulating hormone (FSH) is another female reproductive hormone.

What is the function of FSH in the menstrual cycle?

[1 mark]

Tick (✓) **one** box.

- FSH causes an egg to mature in the ovary. ☐
- FSH causes breast development. ☐
- FSH causes the uterus lining to break down. ☐

4.5.3.4 Hormones in human reproduction

Question 09 · continued

0 5 . 3 Sperm cells can survive inside a woman's reproductive organs for five days.

An egg cell can survive for one day after ovulation.

In one woman ovulation occurred on day 14.

Give the range of days on which sexual intercourse could result in fertilisation.

[1 mark]

From day _____ to day _____

0 5 . 4 If a man and a woman have sexual intercourse and do **not** want to produce a baby, they may use contraception.

Explain how different methods of contraception prevent pregnancy.

[6 marks]

10

4.5.3.4 Hormones in human reproduction

Question 10

June 2023 | 8461/2F | Original Q1

0 1 Hormones are important for controlling many processes in the human body.

Hormones are produced by glands.

0 1 . 1 Which organ system has glands that produce hormones?

[1 mark]

Tick (✓) **one** box.

- The circulatory system ☐
- The endocrine system ☐
- The nervous system ☐

0 1 . 2 How are hormones transported around the body?

[1 mark]

Tick (✓) **one** box.

- By the blood ☐
- By the muscles ☐
- By the nerves ☐

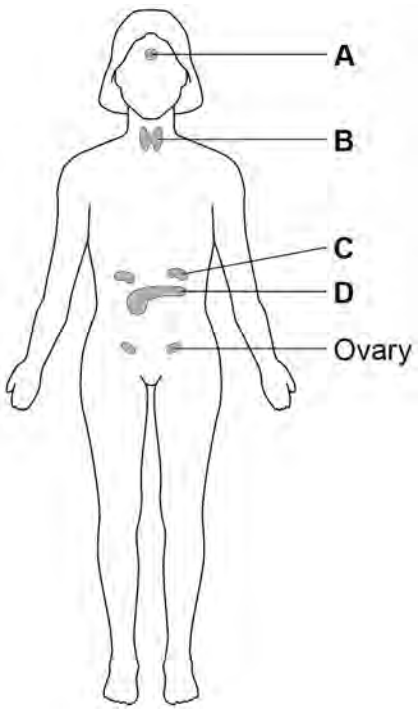
Question 1 continues on the next page

4.5.3.4 Hormones in human reproduction

Question 10 · continued

Figure 1 shows glands in a woman's body.

Figure 1



0 1 . 3 Draw **one** line from each gland to the name of that gland.

[3 marks]

Gland	Name
A	Adrenal
B	Pituitary
C	Testes
	Thyroid

4.5.3.4 Hormones in human reproduction

Question 10 · continued

0 1 . 4 Which gland in **Figure 1** produces insulin?

[1 mark]

Tick (✓) **one** box.

A ☐ **B** ☐ **C** ☐ **D** ☐

0 1 . 5 Which organ does insulin mainly affect?

[1 mark]

Tick (✓) **one** box.

The brain ☐

The liver ☐

The ovary ☐

0 1 . 6 Give **one** effect of insulin.

[1 mark]

_____

_____

Question 1 continues on the next page

4.5.3.4 Hormones in human reproduction

Question 10 · continued

Some hormones control a woman's menstrual cycle.

0 1 . 7 Which hormone causes an egg to mature in the ovary?

[1 mark]

Tick (✓) **one** box.

- Adrenaline ☐
- Follicle stimulating hormone (FSH) ☐
- Testosterone ☐

0 1 . 8 Which **two** are hormones that help to maintain the lining of the uterus during pregnancy?

[2 marks]

Tick (✓) **two** boxes.

- Amylase ☐
- Oestrogen ☐
- Progesterone ☐
- Protease ☐
- Thyroxine ☐

4.5.3.4 Hormones in human reproduction

Question 10 · continued

0 1 . 9 Contraception prevents pregnancy.

Give **two** methods of contraception that use hormones.

[2 marks]

1 _____

_____

2 _____

_____

13

Turn over for the next question