

16.5 Sex hormones in humans

Name: _____ Class: _____ Date: _____

Total: 6 marks

KEY WORDS menstrual cycle
• secondary sexual characteristics

• hormones • ovulation
• progesterone

Objective

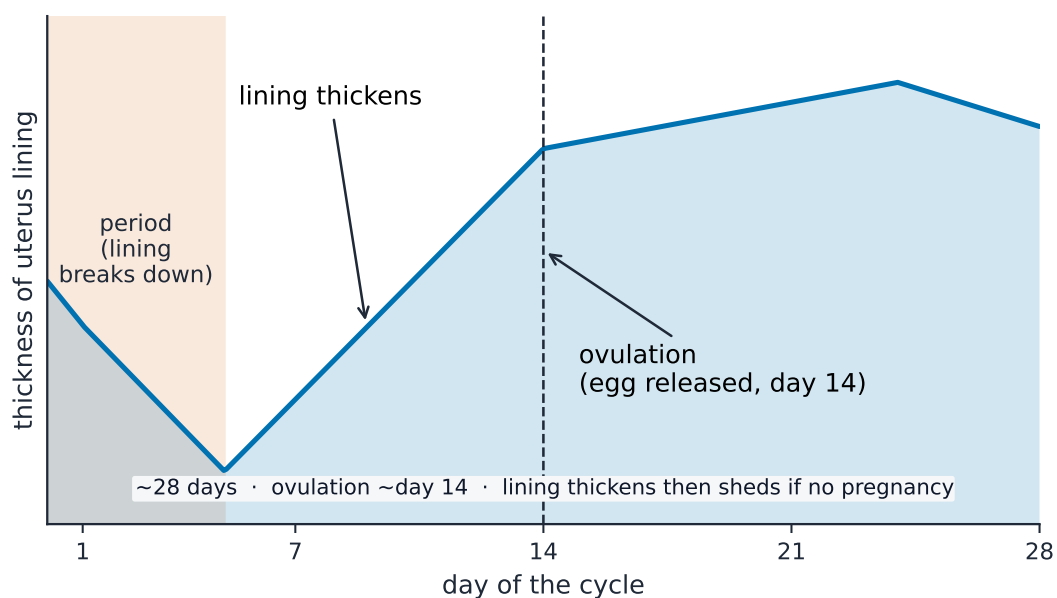
Build the skills to answer exam questions on **sex hormones in humans** , secondary sexual characteristics, and the **menstrual cycle** .

You must be able to:

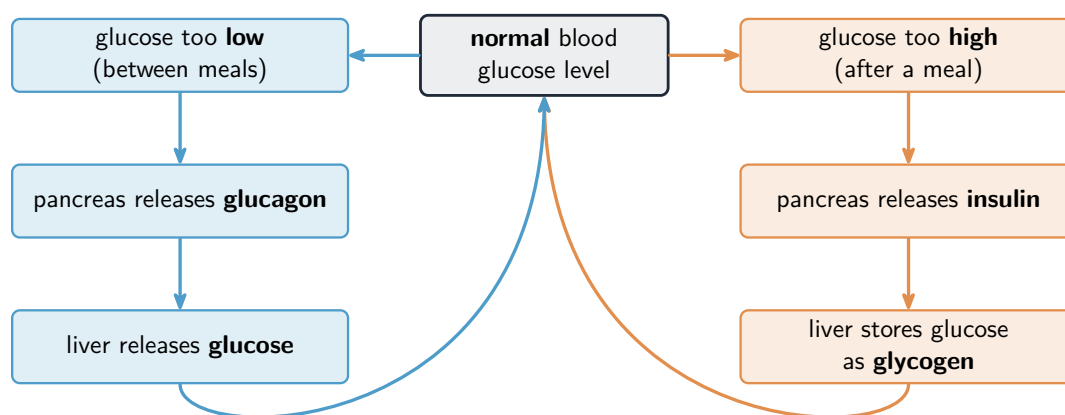
- state the roles of testosterone and oestrogen at puberty
- describe the events of the menstrual cycle
- name the hormones that control the cycle (FSH, LH, oestrogen, progesterone)

1 Key knowledge and worked examples

■ The menstrual cycle



Lining thickens → ovulation (day 14) → a period follows if there is no fertilisation



Sex hormones are controlled by negative feedback

- **testosterone** (boys) and **oestrogen** (girls) cause secondary sexual characteristics.
- hormones: FSH (egg matures), LH (ovulation), oestrogen (thickens lining), progesterone (maintains lining).

2 Practice

2.1 Name the hormone responsible for female secondary sexual characteristics. [1]

2.2 State on which day of a 28-day cycle ovulation usually occurs. [1]

3 Exam-style questions

3.1 Ovulation is the: [1]

- ☐ A thickening of the uterus lining
- ☐ B release of an egg from the ovary
- ☐ C breakdown of the lining
- ☐ D fusion of gametes

3.2 The menstrual cycle prepares the uterus for pregnancy.

(a) Describe what happens to the uterus lining if the egg is not fertilised. [2]

(b) Name the hormone that triggers ovulation. [1]

Solutions

Each answer shows the steps, then the **result**.

2.1

- female secondary sexual characteristics: **oestrogen**

2.2

- ovulation is about **day 14** of a 28-day cycle

3.1 B

- ovulation is the **release of an egg from the ovary**
- A is the lining thickening; C is menstruation; D is fertilisation

3.2

(a)

- the lining **breaks down**
- and leaves the body as a **period**

(b)

- ovulation is triggered by **LH**