16.5 Sex hormones in humans

Name: _____ Class: _____ Date: _____ **Total: 6 marks**

KEY WORDS menstrual cycle • hormones • ovulation • secondary sexual characteristics • progesterone

Objective

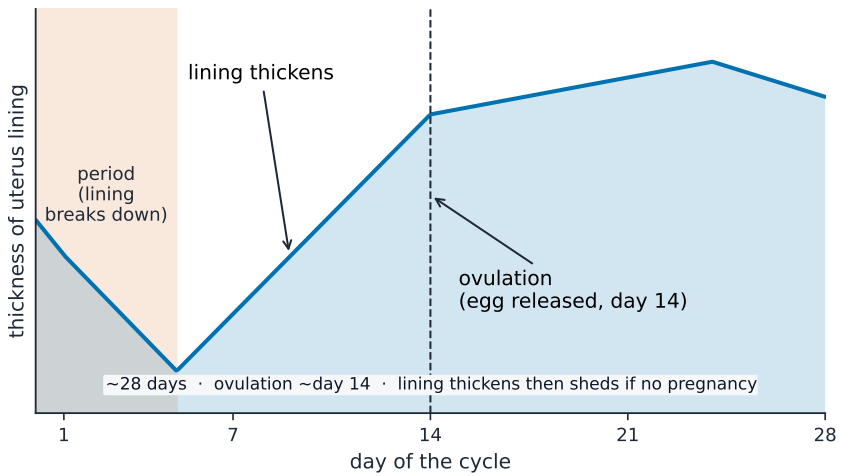
Build the skills to answer exam questions on **sex hormones in humans** – **puberty**, secondary sexual characteristics, and the **menstrual cycle**.

You must be able to:

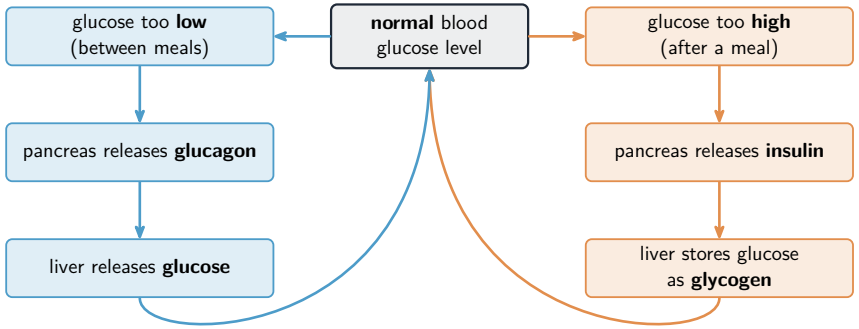
- state the roles of testosterone and oestrogen at puberty
- describe the events of the menstrual cycle
- name the hormones that control the cycle (FSH, LH, oestrogen, progesterone)

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]