1.5 The Menstrual Cycle and Hormonal Control of Fertility: 10-minute Pack

EDEXCEL 4BI1 · Calculator allowed · about 10 minutes

Total Marks

Name: _____ Date: ____ / ____ / _____

Answer ALL questions. Show all your working.

1 State what is meant by menstruation in the context of the human female menstrual cycle.

(Total for Question 1 is 1 mark)

2 Describe, in the context of the 28-day cycle, when ovulation usually occurs and what ovulation is.

(Total for Question 2 is 2 marks)

3 Describe briefly how combined hormonal contraceptive pills use oestrogen and progesterone to prevent pregnancy.

(Total for Question 3 is 3 marks)

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4 Explain the role of FSH in the menstrual cycle, including where it is produced.

(Total for Question 4 is 2 marks)

5 Explain the role of LH in the menstrual cycle and its relationship with ovulation.

(Total for Question 5 is 2 marks)

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Mark scheme · 1.5 The Menstrual Cycle and Hormonal Control of Fertility: 10-minute Pack

Question 1

the shedding or loss of the lining of the uterus (endometrium) with bleeding **B1**

Answer: Shedding of the uterus lining (endometrium) with bleeding

Question 2

ovulation usually occurs around day 14 of a 28-day cycle **B1**

ovulation is the release of a mature egg (ovum) from an ovary **B1**

Answer: Ovulation occurs about day 14 in a 28-day cycle; it is the release of a mature egg from an ovary

Question 3

states that the pill contains synthetic oestrogen and progesterone (or progestogen) **B1**

states that these hormones prevent the LH surge and ovulation by negative feedback on the pituitary **B1**

notes that progesterone component also thickens cervical mucus, making sperm entry more difficult **B1**

Answer: The combined pill supplies oestrogen and progesterone to prevent the LH surge and so prevent ovulation, and progesterone thickens cervical mucus to reduce sperm entry

Question 4

states FSH is produced by the pituitary gland **B1**

explains FSH stimulates growth and maturation of ovarian follicles and stimulates oestrogen production **B1**

Answer: FSH is produced by the pituitary gland and stimulates ovarian follicles to grow and mature and stimulates oestrogen production

Question 5

states LH is produced by the pituitary gland **B1**

explains the LH surge triggers ovulation and formation of the corpus luteum **B1**

Answer: LH from the pituitary surges around day 14 to trigger ovulation and helps form the corpus luteum

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