OCR GCSE 21ST CENTURY BIOLOGY B · J257

BIOLOGY



MARK SCHEME

B5.5 WHAT ROLE DO HORMONES PLAY IN HUMAN REPRODUCTION? (HIGHER)

SCORE	PERCENTAGE
/12	%

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Question			Answer/Indicative content	Marks	Guidance
1	a		C ✓	1	
	b		✓ FSH	1	
			Total	2	
2	a		* Please refer to the marking instructions on page 4 of this mark scheme for guidance on how to mark this question. Level 3 (5–6 marks) *Explains fully the physical changes that occur during the menstrual cycle* ***AND*** *Links them correctly to evidence from the diagram and graphs* *There is a well-developed line of reasoning which is clear and logically structured. The information presented is relevant and substantiated.* Level 2 (3–4 marks) *Explains two physical changes that occur during the menstrual cycle* ***AND*** *Links them correctly to evidence from the diagram and graphs* *There is a line of reasoning presented with some structure. The information presented is relevant and supported by some evidence.* Level 1 (1–2 marks) *Explains one physical change that occurs during the menstrual cycle* ***AND*** *links it correctly to evidence from the diagram and graphs* *The information is basic and communicated in an unstructured way. The information is supported by limited evidence and the relationship to the evidence may not be clear.* 0 marks *No response or no response worthy of credit.*	6	AO1.1 Physical and hormonal menstrualcycle chan • Uterus becomes thicker because it becomes more vascular • Ovulation is when an egg is released from an ovary • Ovulation occurs when a follicle ruptures / bursts • Has to be an egg present in the oviduct / Fallopian tube for fertilisation could occur • High progesterone and thick uterus lining required for successful implantation. AO3.1a Interpretation of graphs and diagram For example: • Days 7–14 uterus lining thickens / develops • Thickening of uterus occurs under the influence of a rise in oestrogen • Day 14 is when ovulation occurs / an egg is released • Follicle bursts due to a peak of LH • Days 15–28, fertilisation could occur • Uterus lining stays thick from days 21–28.

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Question			Answer/Indicative content	Marks	Guidance
	b		**Any two from** Condom is least effective / has highest percentage of pregnancies ✓ Hormone implants are most effective / have lowest percentage of pregnancies ✓ Birth control pill still has quite a high percentage of pregnancies ✓ **AND** **Any one from** Condom may burst / fall off ✓ Implant is a long-term method ✓ People may forget to take the (birth control) pill ✓ **AND** Choice for couple e.g. implant as most effective and will suit them as married and in no hurry to have children ✓	4	Candidates must provide a suggestion of a contraceptive method with a reason to get four marks. One mark is awarded for the choice, two further marks come from the evaluation and one for the reason(s). **ALLOW** any other justified choice
			Total	10	

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