

Name:

Edexcel Style

Combined Science GCSE

Animal Coordination, Control and Homeostasis Test (Levels 4–9)

Date:

Time Allowed: 50mins

Question	Links to Student Progress Sheet	Score	Total Marks Available
1	7.1, 7.2a, b		4
2	7.3a		10
3	7.4, 7.5		8
4	7.6, 7.7		12
5	7.8		6
6	7.13, 7.15, 7.16, 7.17		10
Total			50

Score	Estimated Grade
47 – 50	9
40 – 46	8
33 – 39	7
28 – 32	6
24 – 27	5
20 – 23	4
0 – 19	U

Please be aware that these grade boundaries are Twinkl's own, and may not be in-line with Edexcel's own.

Area for Improvement:

1. (a) Complete the sentence by putting a tick in the box next to your answer.

Adrenalin is produced in the...

(1)

- ☐ pancreas.
- ☐ pituitary gland.
- ☐ thyroid gland.
- ☐ adrenal gland.

- (b) Complete the sentence by putting a tick in the box next to your answer.

Thyroxine is produced in the...

(1)

- ☐ pancreas.
- ☐ pituitary gland.
- ☐ thyroid gland.
- ☐ adrenal gland.

- (c) Tick the box which describes a change in the human body as a response to adrenalin.

(1)

- ☐ increased heart rate
- ☐ increased blood pressure
- ☐ increased blood flow to muscles
- ☐ raised blood sugar levels
- ☐ all of the above

- (d) What does thyroxine control?

(1)

(Total for Question 1 = 4 marks)

2. (a) What does thyroxine control?

(1)

- ☐ heart rate
- ☐ metabolic rate
- ☐ breathing rate
- ☐ growth rate

(b) Complete the sentence by putting a tick in the box next to your answer.

Thyroxine works as a...

(1)

- ☐ fight or flight response.
- ☐ nervous system response.
- ☐ positive feedback system.
- ☐ negative feedback system.

(c) Explain how thyroxine works in the human body.

(8)

(Total for Question 2 = 10 marks)

3. (a) The diagram below is a representation of the human menstrual cycle.

(i) What is happening on days 1 to 7?

(1)

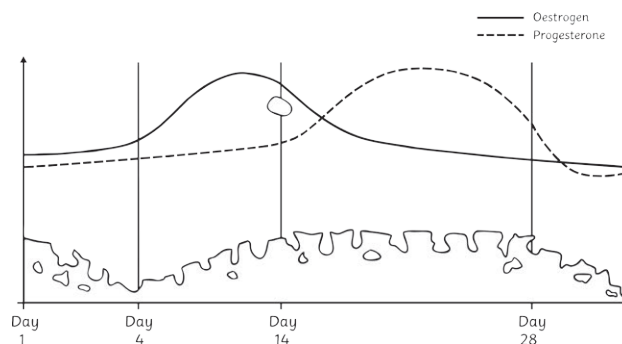
(ii) What is happening on day 14?

(1)

(iii) What is happening on day 19?

(1)

(b) The graph below shows how hormone levels in the body change during the menstrual cycle.



What is the role of oestrogen?

(2)

(c) State which hormone remains at a high level in a pregnant woman and explain why.

(3)

(Total for Question 3 = 8 marks)

4. (a) Complete the table by putting a tick or a cross into each empty box.

(4)

	Method of Contraception	
	Barrier	Chemical
Contraceptive pill		
Intrauterine device (coil)		
Condom		
Contraceptive implant		

(b) Explain how the contraceptive pill can reduce the chance of pregnancy.

(4)

(c) Compare the use of condoms and the contraceptive implant as a method of contraception.

(4)

(Total for Question 4 = 12 marks)

5. (a) Choose words from the box below to complete the following sentences about in-vitro fertilisation (IVF).

(4)

ovary	uterus	egg	sperm	inside	outside
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IVF can be used if a couple are having difficulty to become pregnant owing to a low quantity or poor quality of _____.

The _____ is fertilised _____ the body and then implanted into the _____.

- (b) Suggest why fertility treatments which use hormones including FSH might be used with IVF.

(1)

- (c) Some people believe there are ethical issues regarding IVF and are against the treatment. Explain why.

(1)

(Total for Question 5 = 6 marks)

6. (a) Complete the table by putting a tick or a cross into each empty box.

(4)

	Type of Diabetes	
	Type 1	Type 2
The body produces insufficient insulin levels		
The body does not use the insulin effectively (insulin resistance)		
Can be treated with insulin injections		
Can be treated through diet and exercise		

(b) Explain how blood glucose concentration is regulated in the body when the glucose level becomes **too high**.

(4)

(c) A patient's mass is recorded as 74kg and his height is 169cm.
Use the equation below to calculate his BMI.

$$\text{BMI} = \frac{\text{mass}}{\text{height}^2}$$

(2)

BMI= _____

(Total for Question 6 = 10 marks)