

Please check the examination details below before entering your candidate information

Candidate surname

Other names

Pearson BTEC Level 3  
Nationals Certificate,  
Extended Certificate,  
Foundation Diploma,  
Diploma, Extended  
Diploma, Diploma

Centre Number

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Learner Registration Number

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**Friday 18 January 2019**

Morning (Time: 1 hour 30 minutes)

Paper Reference **31645H**

**Animal Management and Animal  
Management with Science**  
**Unit 2: Animal Biology**

**You do not need any other materials.**

Total Marks

### Instructions

- Use **black** ink or ball-point pen.
- **Fill in the boxes** at the top of this page with your name, centre number and learner registration number.
- Answer **all** questions.
- Answer the questions in the spaces provided  
– *there may be more space than you need.*

### Information

- The total mark for this paper is 80.
- The marks for **each** question are shown in brackets  
– *use this as a guide as to how much time to spend on each question.*

### Advice

- Read each question carefully before you start to answer it.
- Try to answer every question.
- Check your answers if you have time at the end.

Turn over ►

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Some questions must be answered with a cross ☒. If you change your mind about an answer, put a line through the box ☒ and then mark your new answer with a cross ☒.

Answer ALL questions.

1 There are seven groups of nutrients that are important in an animal's diet.

(a) Complete the table below with the **two** missing groups of nutrients.

(2)

Water
Fibre
Lipids
Proteins
Minerals

(b) State the name of the muscular contractions that push food and waste products through the digestive system.

(1)

(c) Complete the table below to show the names of organs and functions of a bird's digestive system.

(4)

Name of organ	Function
	Stores food
	Mechanical digestion/grinding food
Proventriculus	
Cloaca	

(Total for Question 1 = 7 marks)

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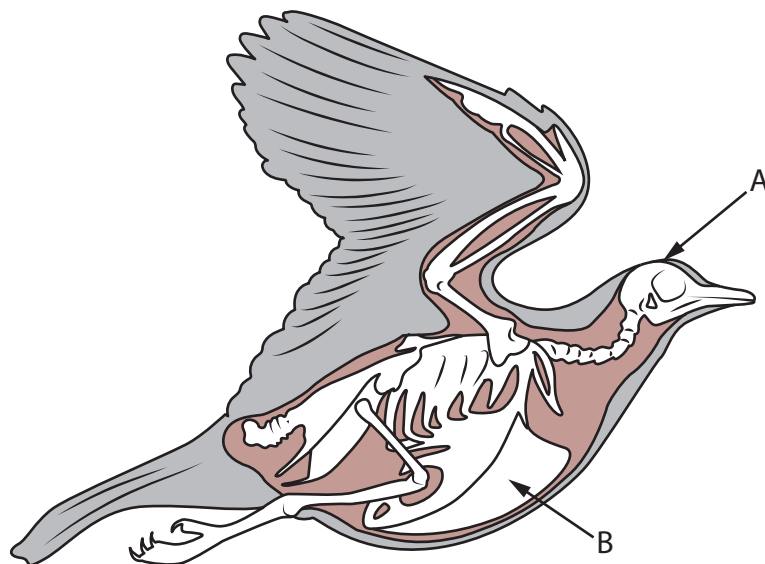
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2 The diagram below shows the skeleton of a bird.



(a) Identify the bones labelled A and B in the diagram above.

(2)

A .....

B .....

(b) Explain **two** adaptations of the musculoskeletal structure of a bird that make it able to fly.

(4)

1 .....

.....

2 .....

.....

(c) State **two** functions of feathers.

(2)

1 .....

2 .....



(d) Describe **three** features of fast twitch muscles.

(3)

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(Total for Question 2 = 11 marks)

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Cows are an example of a ruminant animal.

3 (a) State **one** cause and **one** symptom of ruminant bloat. (2)

Cause

.....  
.....

Symptom

.....  
.....

(b) State the length of the gestation period of a cow. (1)

.....

(c) State **three** parts of the female reproductive system. (3)

1 .....

2 .....

3 .....

(d) Describe the role of these **two** hormones in reproduction. (4)

Oestrogen

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.....  
.....  
.....

Oxytocin

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(e) Give **two** purposes of cell division.

(2)

1 .....

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2 .....

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(Total for Question 3 = 12 marks)

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4 Cats have whiskers that allow them to respond to the environment around them to control body temperature.

(a) Describe how sense organs cause responses to stimuli.

(4)

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(b) Give **two** functions of the sympathetic nervous system.

(2)

1 .....

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2 .....

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(c) Describe the following processes.

(4)

Vasoconstriction

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Vasodilation

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(d) State **two** types of neuron.

(2)

1 .....

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2 .....

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**(Total for Question 4 = 12 marks)**

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5 (a) Explain **one** way the structure of a red blood cell is related to its function.

(2)

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(b) Give the role of the sinoatrial node in the heart.

(1)

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(c) Describe mitral valve disease (MVD).

(4)

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When an animal is being chased it respire anaerobically.

(d) Discuss anaerobic respiration.

(8)

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(e) State which organelle is the site for ATP production.

(1)

(f) Give **three** structures involved in inhalation and exhalation in mammals.

(3)

1 .....

2 .....

3 .....

**(Total for Question 5 = 19 marks)**

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6 Animals are classified into groups in order to be easily identified and studied.

(a) Compare a pangolin to an armadillo.

(4)

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(b) State **four** distinguishing features of reptiles.

(4)

1 .....

2 .....

3 .....

4 .....

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(c) Describe how variation in animals leads to evolution.

(3)

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**(Total for Question 6 = 11 marks)**

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The integumentary system is the outer covering that protects the body.

7 Discuss the structure and functions of the integumentary system.

(8)

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Handwriting practice area with 20 horizontal dotted lines.

**(Total for Question 7 = 8 marks)**

**TOTAL FOR PAPER = 80 MARKS**



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