

Write your name here

Surname

Other names

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

Centre Number

--	--	--	--	--	--	--

Learner Registration Number

--	--	--	--	--	--	--	--	--	--

Animal Management and Animal Management with Science

Unit 2: Animal Biology

Wednesday 17 January 2018 – Morning
Time: 1 hour 30 minutes

Paper Reference

31645H

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 ►

P51734A

©2018 Pearson Education Ltd.

1/1/1/1/1/1/1/1/1




Pearson

Answer ALL questions. Write your answers in the spaces provided.

1 (a) The animal skeleton is divided into two main divisions.

Complete the table with the **two** divisions of the skeletal system.

(2)

Divisions of skeleton	Components
	Shoulder, pelvis, upper limbs, lower limbs
	Skull, vertebral column, ribs and sternum.

(b) State **one** adaptation of a rabbit's skeleton that helps the rabbit to hop.

(1)

.....

.....

(c) State **two** musculoskeletal disorders.

(2)

1

.....

2

.....

(Total for Question 1 = 5 marks)

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA



DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

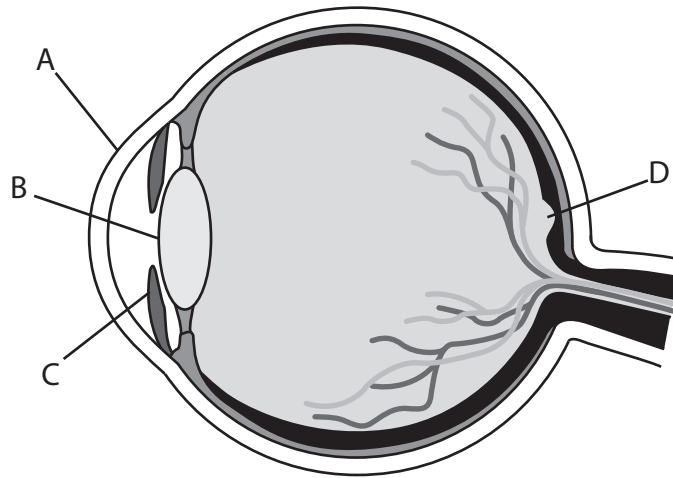
DO NOT WRITE IN THIS AREA

BLANK PAGE
QUESTION 2 BEGINS ON THE NEXT PAGE.



2 (a) Name the following parts of the eye.

(4)



A

B

C

D

(b) Explain **one** function of the retina.

(2)

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

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA



(c) Explain **two** ways that the nervous system controls the action of the eye to enable effective sight.

(4)

1

.....

.....

.....

2

.....

.....

.....

(d) Explain **one** advantage of eye positioning in sheep.

(3)

.....

.....

.....

.....

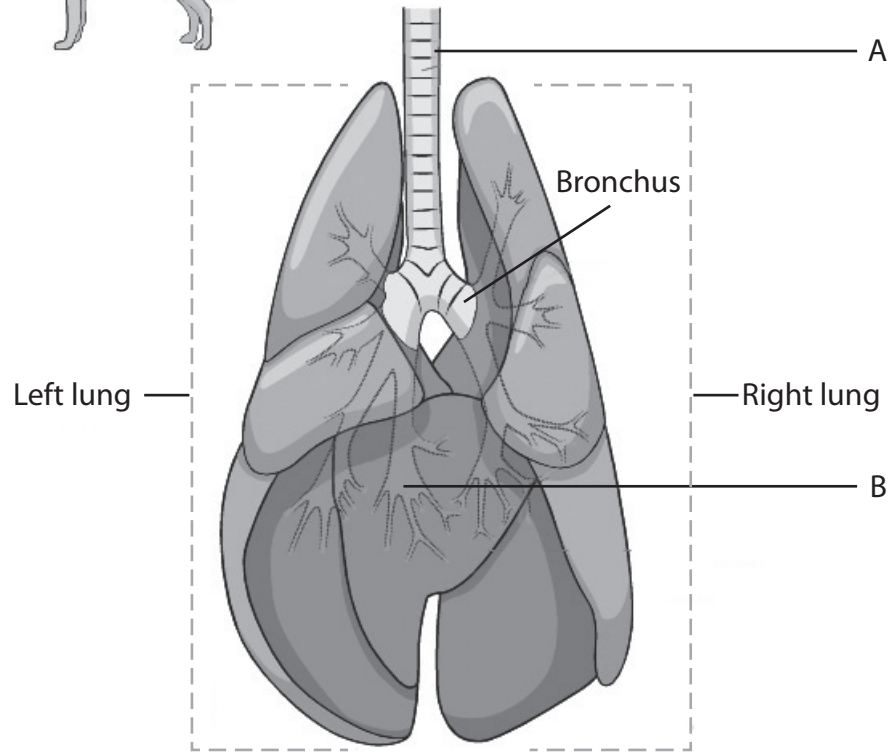
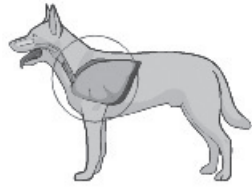
.....

.....

(Total for Question 2 = 13 marks)



3 Below is a diagram of the lungs of a dog.



(a) Name the structures A and B.

(2)

A

.....

B

.....

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA



(b) Describe the role of the diaphragm.

(4)

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

When dogs exercise, their respiratory rate and volume increases.

(c) Describe how respiratory rate and volume are controlled.

(4)

.....

.....

.....

.....

.....

.....

.....

.....

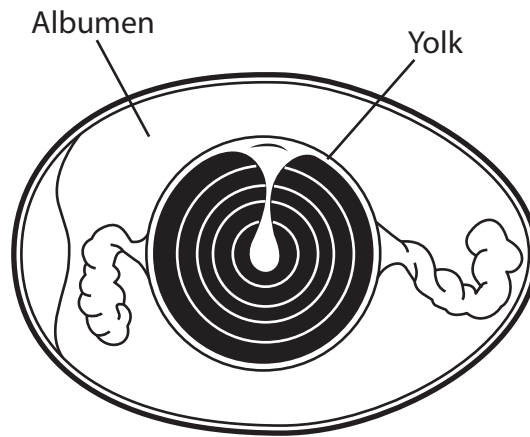
.....

.....

(Total for Question 3 = 10 marks)



4 Below is an image of a cross section of a chicken egg.



(a) Explain the role of the **two** structures identified in the diagram.

(4)

Yolk

.....

.....

.....

.....

Albumen

.....

.....

.....

.....

(b) Describe how photoperiod affects egg production in chickens.

(2)

.....

.....

.....

.....

(Total for Question 4 = 6 marks)



DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

BLANK PAGE

QUESTION 5 BEGINS ON THE NEXT PAGE.



5 (a) Explain **two** reasons why carbohydrates are important in the diet of an animal.

(4)

1

2

(b) Explain **two** functions of the liver.

(4)

1

2

(c) Discuss how blood sugar levels are maintained in animals.

(8)

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA



DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

Handwriting practice area with 10 horizontal dotted lines.

(Total for Question 5 = 16 marks)



There are five kinds of epithelial tissue. One kind is ciliated epithelial tissue.

6 (a) State **two** other kinds of epithelial tissue.

(2)

1

2

(b) Explain **two** roles of ciliated epithelial tissue.

(4)

1

2

(c) Describe the sliding filament theory of muscle contraction.

(4)

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA



(d) Compare fast and slow twitch muscle fibres.

(4)

.....

.....

.....

.....

.....

.....

.....

.....

.....

(Total for Question 6 = 14 marks)

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA



7 (a) Explain the role of water in a cat's diet.

(4)

.....

.....

.....

.....

.....

.....

.....

.....

.....

(b) Explain how intestinal villi are adapted to absorb biological molecules.

(4)

.....

.....

.....

.....

.....

.....

.....

.....

.....

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA



(c) Discuss the structural adaptations of the digestive system of birds.

(8)

Dotted lines for writing.

(Total for Question 7 = 16 marks)

TOTAL FOR PAPER = 80 MARKS



DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

BLANK PAGE

