

Write your name here

Surname

Other names

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

Centre Number

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Learner Registration Number

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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 ►

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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)

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

(2)

1

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2

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(Total for Question 1 = 5 marks)

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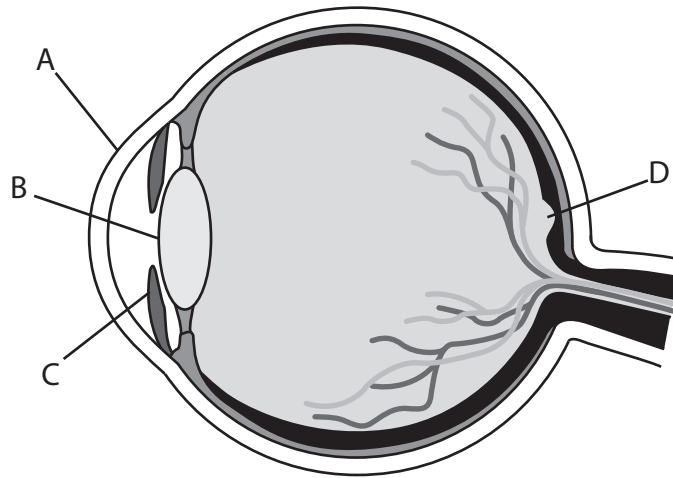
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QUESTION 2 BEGINS ON THE NEXT PAGE.



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

(4)



A

B

C

D

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

(2)

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

(4)

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2

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

(3)

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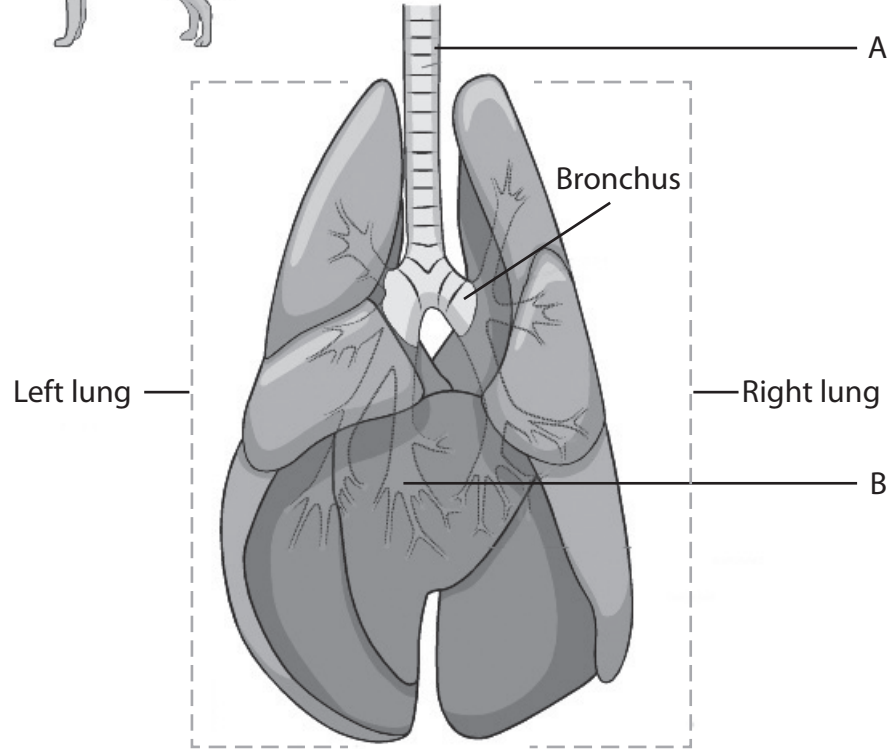
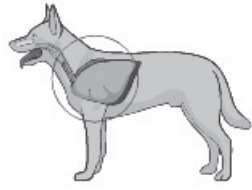
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(Total for Question 2 = 13 marks)



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



(a) Name the structures A and B.

(2)

A

B

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(b) Describe the role of the diaphragm.

(4)

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When dogs exercise, their respiratory rate and volume increases.

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

(4)

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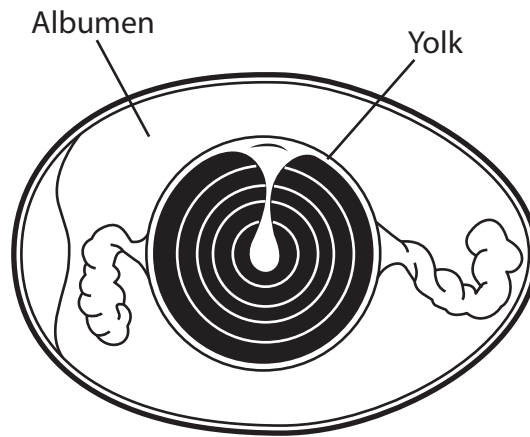
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(Total for Question 3 = 10 marks)



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

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Albumen

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

(2)

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(Total for Question 4 = 6 marks)



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QUESTION 5 BEGINS ON THE NEXT PAGE.



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

(4)

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2

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

(4)

1

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

(8)

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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)

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(d) Compare fast and slow twitch muscle fibres.

(4)

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(Total for Question 6 = 14 marks)

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

(4)

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

(4)

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