

Write your name here

Surname					Other names						
Pearson BTEC Level 3 Nationals Certificate, Extended Diploma, Diploma, Extended Diploma		Centre Number					Learner Registration Number				
<h1>Animal Management and Animal Management with Science</h1> <h2>Unit 2: Animal Biology</h2>											
Wednesday 24 May 2017 – Morning							Paper Reference				
Time: 1 hour 30 minutes							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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Answer ALL questions. Write your answers in the spaces provided.

Scientific taxonomies are used to classify animals to species level.

1 (a) Give the missing **two** vertebrate classes.

(2)

Mammalia
Aves
Amphibia

(b) Define the term 'species'.

(1)

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(c) State **two** ways evolution takes place.

(2)

1

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(d) The table below shows an incomplete taxonomic hierarchy.

Complete the **two** missing grouping levels.

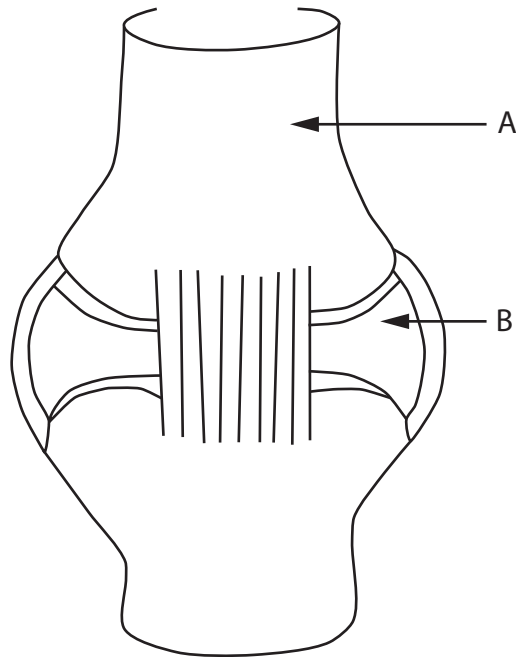
(2)

Kingdom
Phylum
Class
Family
Genus

(Total for Question 1 = 7 marks)



Below is a diagram of a joint.



2 (a) Label structures A and B on the joint.

(2)

A

B

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(b) There are three types of joint. One type is fibrous joints.

State the **two** other types of joint.

(2)

1

2

(c) Give **three** layers of the skin.

(3)

1

2

3

(d) State **two** differences between tendons and ligaments.

(2)

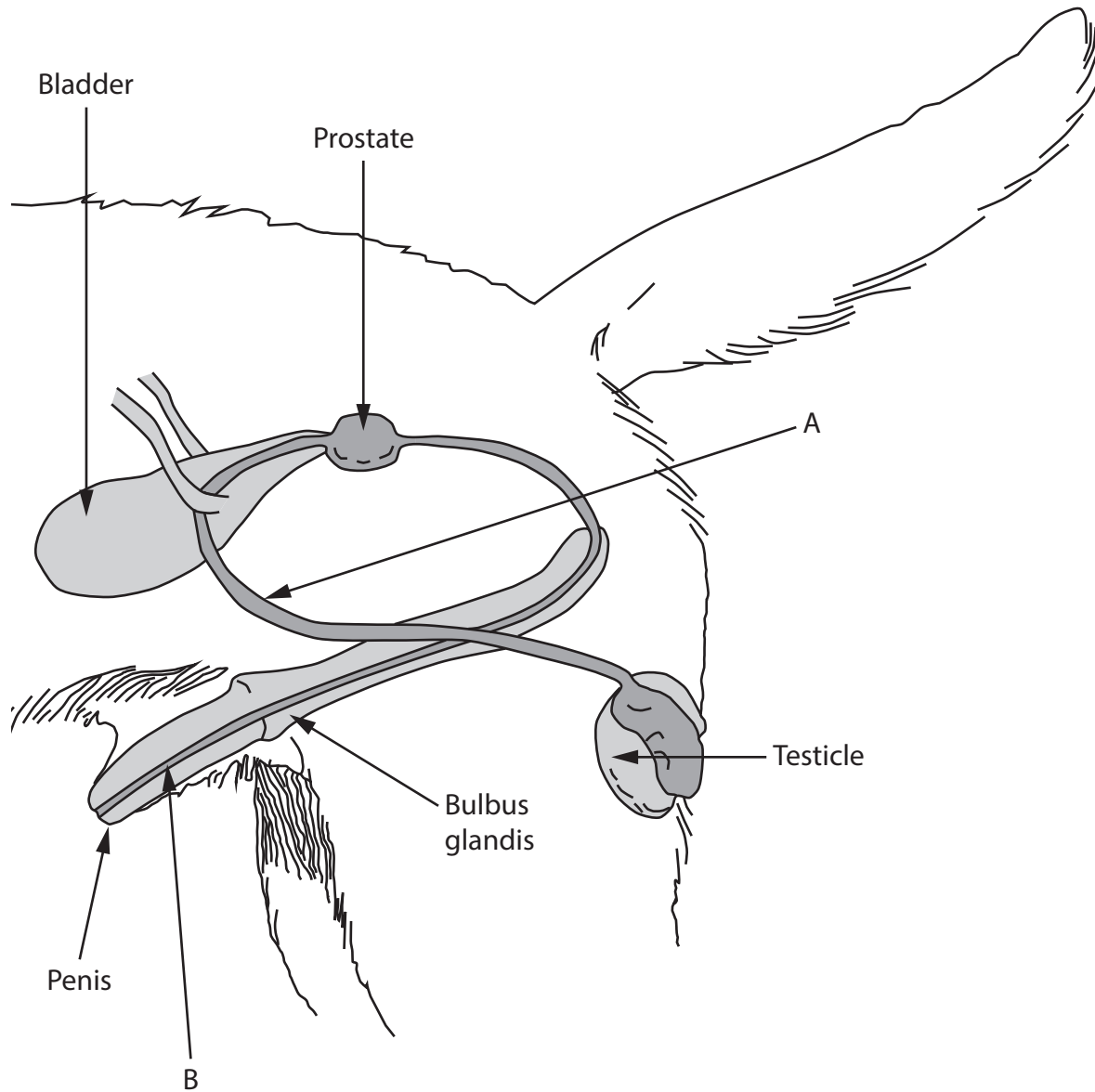
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(Total for Question 2 = 9 marks)



3 Below is a diagram of the reproductive system of a dog.



(a) Label structures A and B.

(2)

A

B

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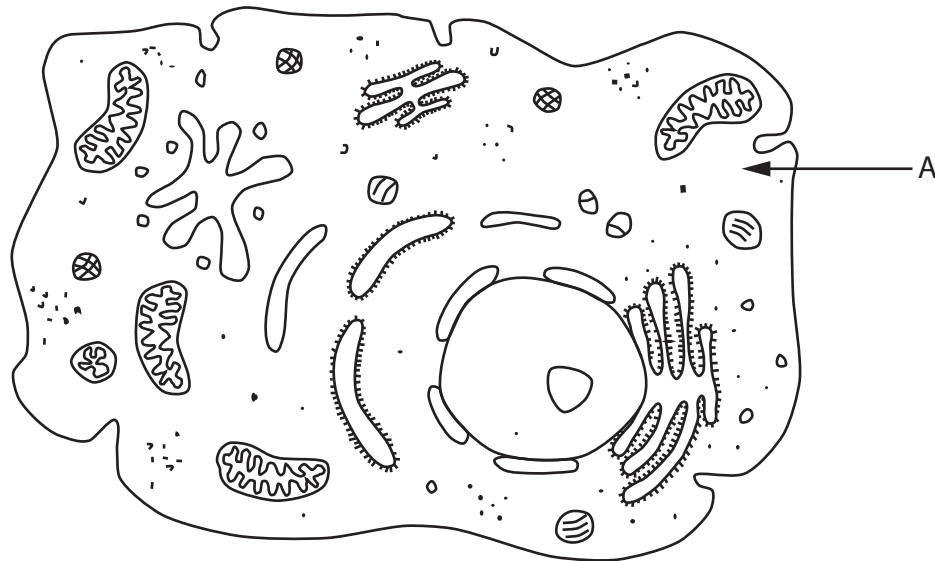
(b) Explain the function of **two** hormones that stimulate sperm maturation.

(4)

1

2

Below is a diagram of an animal cell.



(c) State the name of the constituent labelled A.

(1)



(d) Describe the function of the nucleus.

(2)

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(Total for Question 3 = 9 marks)

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QUESTION 4 BEGINS ON THE NEXT PAGE.



4 (a) Explain the role of protein in the diet of a pregnant bitch.

(4)

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(b) (i) Explain a feature of the dental structure for a herbivore.

(2)

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(ii) Explain a feature of the dental structure for a carnivore.

(2)

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(c) Explain **one** function of the pancreas.

(2)

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5 (a) Give **one** function of the mitral valve.

(1)

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(b) State the function of killer T-cells and helper T-cells in the immune system.

(2)

Killer T-cells

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Helper T-cells

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(c) State **two** structures of the lymphatic system.

(2)

1
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2
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(d) Explain the role of the lymphatic system in immune response.

(4)

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(e) Give **two** advantages of a double circulatory system in mammals.

(2)

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2

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(f) Describe the differences between foetal haemoglobin and adult haemoglobin.

(4)

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(Total for Question 5 = 15 marks)

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6 (a) Explain the effect of the vasodilation of arterioles next to the skin.

(4)

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(b) State **two** symptoms of hypothermia.

(2)

1

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2

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(c) State **two** symptoms of hyperthermia.

(2)

1

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2

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(Total for Question 6 = 8 marks)

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QUESTION 7 BEGINS ON THE NEXT PAGE.



7 (a) Explain the role of skin in excretion.

(3)

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(b) Explain how endothermic mammals maintain their normal body temperature.

(3)

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