HM Government

T-LEVELS

T Level Technical Qualification in Animal Care and Management (Level 3)

Paper 2 – Animal Science Core Pathway (8717-041)

If provided, stick your candidate barcode label here.

Date of exam: TBC
Duration: 2 hours

Candidate name (first, last)

First

Last

Candidate enrolment number

Date of birth (DDMMYYYY)

Gender (M/F)

Assessment date (DDMMYYYY)

Centre number

Candidate signature/declaration*

- If additional answer sheets are used, enter the additional number of pages in this box. ➡
- Before taking the examination, **all candidates** must check that their barcode label is in the appropriate box. Incorrectly placed barcodes may cause delays in the marking process.
- Please ensure that you staple additional answer sheets to the back of this answer booklet, clearly labelling these with your full name, enrolment number, centre number and qualification number in BLOCK CAPITALS.
- All candidates need to use a **black/blue** pen. **Do not** use a pencil or gel pen, unless otherwise instructed.
- If provided with source documents, these documents **will not** be returned to City & Guilds and will be shredded. Do not write on the source documents.
- *** I declare that I had no prior knowledge of the questions in this examination and that I will not divulge to any person any information about the questions.**

You should have the following for this examination

- a pen with blue or black ink

General instructions

- The marks for questions are shown in brackets.
- This examination contains **16** questions. Answer all questions.
- Answer the questions in the spaces provided. Answers written in margins or on blank pages will not be marked.
- Cross through any work you do not want to be marked.

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This exam has been split into **two** sections. Below details the types of questions and marks available for each section. Please allow time for each section accordingly.

Section A is made up of **44** marks and includes **13** short answer and medium answer questions.

Section B is made up of **36** marks and includes **3** extended response questions.

Section A

1 Name **one** legislation or regulation regarding waste disposal that businesses in the animal science sector must comply with. (1 mark)

2 State **two** control measures which minimise the risks associated with lone working. (2 marks)

3 Identify **two** components of blood. (2 marks)

4 a) State the function of ribosomes. (1 mark)

b) State the function of lysosomes. (1 mark)

5 a) Identify **one** of the divisions of the autonomic nervous system. (1 mark)

b) Explain how the autonomic nervous system responds to a threat. (2 marks)

6 Give **two** examples of the implications to animal welfare, if there are disruptions to the supply chain demands of a veterinary practice. (2 marks)

7 Explain **two** differences between fast and slow twitch muscle fibres in skeletal muscles. (4 marks)

8 Explain **two** functions of the integumentary system in amphibians. (4 marks)

9 A business stores the food for the animals it keeps in large paper sacks. There is currently a rat infestation in its food store and some of the storage bags have been damaged.

Explain **one** action the business could take to maintain biosecurity in its food store. (2 marks)

10 A business needs to dispose of swabs that have been contaminated with animal bodily fluids.

Explain **two** actions to safely dispose of the swabs.

(4 marks)

11 A juvenile dog has been brought into a rescue kennel. The dog has been fed an inappropriate diet prior to arriving at the kennel and is underweight due to malnutrition but is otherwise healthy.

Explain **three** ways that the dog's nutrient requirement would differ from an adult dog of healthy weight.

(6 marks)

12 A geriatric cat has sustained superficial wounds to one of its forelimbs.

Explain **three** ways the animal's life stage would affect wound healing.

(6 marks)

13 A pet shop is found to have two species of wild caught snakes that have been caught outside of the UK and imported illegally.

Explain how this illegal trading can threaten biosecurity within the shop.

(6 marks)

Section B

14 An animal management centre has acquired a new goat and needs to determine the most appropriate and easily digested diet to prevent nutritional deficiencies and disorders. The current source of nutrients for the goat is a large volume of cereals and grains with a small amount of roughage. The goat has limited access to water.

Analyse how the structure and function of the goat's ruminant digestive system enables it to digest and extract nutrients from its herbivorous diet.

Evaluate the suitability of the current sources of nutrients in the goat's diet.

(12 marks)

15 Lions have adapted in various ways to enable them to hunt and catch their prey. They demonstrate a range of social predator behaviours and strategies to hunt cooperatively and have physical adaptations to increase the chance of success.

Analyse how a lion's skeletal system adaptations enable it to successfully hunt its prey.

Evaluate how social behaviours used by a pride of lions can determine the outcome of a hunt.

(12 marks)

16 A severe thunderstorm has been forecasted to arrive in the next three days, bringing a risk of strong winds and flooding to both a donkey sanctuary and the surrounding area. This means the sanctuary may be inaccessible for staff, deliveries and collections for the duration of the storm and the following days. The storm may also cause disruptions to the sanctuary's power supply. There is no suitable transport available to move the donkeys offsite, therefore, a minimal number of staff will be required to stay in onsite accommodation during the storm due to the predicted inaccessibility of the sanctuary.

Analyse the hazards and risks to the staff remaining onsite throughout the storm. Justify recommended measures to ensure the ongoing care of the donkeys during the period of inaccessibility.

(12 marks)

End of Assessment

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