

# **T Level Technical Qualification in Animal Care and Management**

## **Animal Management and Science Occupational Specialism**

**Knowledge Test Guide Standard Exemplification Material  
Distinction**

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## Introduction

The sample evidence within this document refers to the Animal Management and Science Occupational Specialism knowledge test. The aim of these materials is to provide centres with examples of knowledge and understanding that attest to a distinction grade. The evidence presented here has been developed to reflect a distinction grade within each question but is not necessarily intended to reflect the work of a single candidate. The candidate responses have been developed to reflect the required standards that would contribute to an overall distinction grade. It is important to note that in live assessments a candidate's performance is very likely to exhibit a spikey profile and the standard of performance will vary across questions. The Guide Standard Exemplification Material (GSEM) illustrates linear performance across all pieces of evidence at the grade. A distinction grade will be based on a mark set for the individual question paper at awarding.

The evidence in this GSEM is separated into the sections as described below. Evidence is presented against questions from the paper. Assessors using the GSEM may find it helpful to review this document along with the Science Knowledge Test sample assessment materials (SAMs).

For the purpose of this GSEM, only the levels-based questions have been included in this evidence. All other questions will be marked as per the mark scheme included in the Science Knowledge Test SAMs.

### Question

This section details the evidence to be submitted for marking for each question. Also referenced in this section are the performance outcomes that the evidence will be marked against when completing the questions.

In this GSEM there is evidence from:

- Q8
- Q18

### Evidence

This section includes the question answers. This will be exemplar evidence that was written as part of the knowledge test and then externally marked by a City & Guilds examiner.

### Commentary

This section includes detailed comments to demonstrate how the evidence attests to the standard of distinction.

It is important to note that the commentary section is not part of the evidence or assessment but are evaluative statements on how and why that response meets a particular standard.

## Grade descriptors

**To achieve a distinction, a candidate will typically be able to:**

Demonstrate an excellent level of performance that consistently meets industry requirements, to be able to enter the animal science industry to begin work in the occupational area.

Demonstrate an excellent understanding of husbandry plans and highly effective technical skills and techniques for carrying out routine health assessments associated with breeding and rearing animals.

Demonstrate an excellent understanding of human-animal interaction, consistently applying safe and welfare orientated techniques when handling, restraining and moving animals, adapting them when necessary.

Accurately interpret technical information to be able to plan and prepare equipment and work areas, assess risk and follow safe working methods appropriately when applying practical skills to an excellent standard and within relevant legislation and regulations.

Produce comprehensive population management plans for the care and monitoring of animals in accordance with relevant legislation, conservation and evolution.

Carry out comprehensive planning and research on reproductive technologies and gene manipulation including thoroughly assessing the validity and reliability of sources.

Carry out comprehensive analysis and evaluation of research to enable effective presentation of results to targeted audiences.

Demonstrate excellent knowledge and understanding of genetics and evolution of common wild and captive animals, health and nutrition for animals and the effects of disease on the animal with reference to veterinary practice and legislation.

Demonstrate excellent knowledge and understanding of fundamental scientific principles relevant to biology and chemistry for animal scientists.

Consistently use technical terminology accurately in plans, reports and documentation.

## Knowledge Test Q8

Evidence contributes to the following:

Performance outcome(s)
PO2 Observe the behaviour, security and breeding practices of animals

Evidence	Candidate producing	Assessor producing	Included in this GSEM
Answer	√		√

The Volcanoes National Park in Rwanda is home to a small population of approximately 350 Mountain Gorillas. Their population is being threatened by the increasing number of tourists and from illegal hunting and poaching from neighbouring countries, Burundi and Congo. The impact of which is shown in the table below.

	2018	2019	2020	2021	2022
<b>Number of African tourists</b>	130,000	180,000	80,000	50,000	200,000
<b>Number of tourists from other continents</b>	1,500,000	1,800,000	500,000	0	2,000,000
<b>Number of Gorilla deaths due to zoonotic disease</b>	24	32	56	9	22
<b>Number of Gorillas hunted/poached</b>	7	9	12	8	5

Describe the mitigations that the Volcanoes National Park could take to help prevent extinction of the Mountain Gorilla.

(6 marks)

### Candidate evidence

In 2021, which was during the Covid Pandemic, the Volcanoes National Park saw the fewest number of Gorilla deaths. This is most likely down to there being so few tourists visiting and a reduction in introduced anthroozoonotic diseases, which the Gorillas have no immunity to.

The National Park could reduce numbers of tourists to the Gorillas and place requirements for testing and isolating prior to visiting the Gorillas. They could ensure all tourists wear

facemasks and keep a safe distance away when they are in the presence of the Gorillas, which will help to minimise any infectious diseases being introduced to the Gorilla group from all tourists.

Another action which the National Park could take to prevent the Gorilla's extinction is acting on the statistics for Gorillas being hunted and poached.

There are a few ways this can be carried out.

1. Providing opportunities to the neighbouring countries, Burundi and Congo, that are likely to have members involved in the illegal hunting activities, who are trying to make an income to support their families. The National Park could assist with other, more sustainable and eco-friendly job opportunities and educating them on the importance of Gorillas for biodiversity, which directly impacts on their lives. Discouraging individuals from getting involved in hunting and poaching.
2. Making penalties for those who have been caught hunting and poaching more serious and therefore discouraging participation from others.
3. Sending out and giving legal rights to poaching patrols to monitor and remove signs of snares or traps and providing active protection to the Gorilla group. They would also have rights to arrest anyone taking part in these illegal hunting/poaching activities.

If the Volcanoes National Park do not take these actions, it is highly likely there will be no Mountain Gorillas to visit within the next 20 years.

## **Commentary**

The candidate has shown excellent knowledge and understanding of the effects of disease on the animal and the mitigations the Volcanoes National Park could take to prevent Mountain Gorilla extinction. For example, the explanation around wearing facemasks to minimise spread of infectious disease demonstrates that their reasoning is detailed and relevant.

They have considered the ways which the spread of disease could be reduced and the threat of hunting and poaching minimised, using key information from the table and relating this to the international Covid pandemic. The examples described are realistic and comprehensive, giving a range of potential mitigations for poaching demonstrating their understanding that there is not a one size fits all solution to the issue. However, the candidate could have given a more balanced response between the mitigations suggested to be taken by the government and by the park. For example, they could have expanded the ways in which the park could have kept the Gorillas safe such as using mandatory temperature and covid testing to prevent illness from spreading.

## Knowledge Test Q18

Evidence contributes to the following:

Performance outcome(s)
PO3 Plan for and manage the good health and welfare of animals

Evidence	Candidate producing	Assessor producing	Included in this GSEM
Answer	√		√

A kitten presenting with signs associated with cat flu has been brought into the veterinary practice and is sitting in a mixed waiting room. They are called into a cat only consultation room and the diagnosis of cat flu is confirmed. The kitten is admitted and hospitalised in the isolation wards and treatment of intravenous fluids, anti-inflammatories and antibiotics is commenced. After five days of treatment, the kitten is discharged back to its owner.

Discuss the role of the veterinary team in the diagnosis of the disease, management and treatment of the kitten when hospitalised and then returned to its owner.

Evaluate the journey of the kitten through the veterinary practice and any impact this may have on the kitten's welfare.

(12 marks)

### Candidate evidence

As part of the Veterinary Surgeons Act 1966 it is illegal for an unqualified individual to diagnose, prescribe treatment or treat the kitten. This is the responsibility of the Veterinary Surgeon (Vet). They should diagnose the condition of the kitten by questioning the owner to find out what symptoms the kitten has been showing, how long the kitten has been unwell and if they have been eating, drinking and passing urine/faeces regularly. This will help the Vet with their diagnosis of cat flu and if a diagnosis could not be found, the Vet would carry out further testing such as bloods, urine or faeces. The Vet would also complete all records for the diagnosis, management and treatment of the kitten, so that the information is easily accessible for anyone working with the kitten during its stay or post treatment.

The role of the Veterinary Nurse (VN) is to ensure the five welfare needs from the Animal Welfare Act 2006 are met and the overall welfare of the kitten is maintained. They will complete a review of the kitten's details, including comparing their current weight against recommended weight information for their breed and age. When the Vet has confirmed the kitten requires admittance, the VN will set up an isolation pen, ensuring it is appropriately heated with comfortable bedding and that there is access to a separate set of cleaning equipment to maintain hygiene and avoids cross contamination. They will carry out the cleaning, disinfection and maintenance of the isolation pen for the duration of the stay. The VN also carries out regular observations of the kitten and provides any supportive care, such as administering IV fluids, as the kitten will be dehydrated, anti-inflammatories to ease the symptoms and antibiotic medication to treat further infection. The VN might need to make the kitten food more appetising to encourage the kitten to eat. The VN will also monitor vital signs such as temperature, pulse and respiration. They will carry out regular health checks



and keep an eye on the kitten's behaviour, how it is responding to the medication and making sure it is recovering well.

Once the kitten has recovered and is able to return home, the role of the receptionist will be to contact the owner. They will confirm the time and date for collection and pass on the instructions from the vet team about the ongoing care of the kitten. The receptionist would also take payment from the owner or liaise with the insurance company as well as organising any follow up appointments.

### **Evaluation of the kitten's journey**

When bringing the kitten to the vet practice, the owner is meeting the Animal Welfare Act 2006, protect from pain, suffering, injury and disease. The kitten is suffering with cat flu, which means its' senses have been impacted due to having nasal discharge, sneezing, difficulty breathing and conjunctivitis, however the owner will have placed a familiar blanket in the cat carry basket, to provide it with some security and comfort. The kitten would be able to hear that its location has changed once it arrived at the vet practice, but it would struggle to smell or see the surroundings, this could be disorientating and cause stress.

The kitten is also likely to hear other species, such as dogs in the mixed waiting room. As the kitten is already feeling lethargic due to the cat flu, the presence of dogs would also impact on how vulnerable and afraid the kitten may become. There is also the impact on the health and welfare of other cats to consider in the waiting room, as cat flu is highly contagious and can spread when the kitten sneezes, it would be better for the owner to wait outside (or in their car) until the Vet is ready to see them.

Once the kitten is moved to the cat only consultation room, it will be a quieter area, this would promote a calmer response from the kitten, however the kitten will need to be handled by the Vet, so that they can assess the kitten's symptoms. The kitten is likely to have a fever and the handling could cause the kitten additional pain, as well as fear as the Vet is an unfamiliar person.

The risk of disease transmission is reduced when the kitten is placed in isolation as biosecurity measures will be in place and the kitten can recover in a calm and quiet environment, this will benefit its welfare and recovery.

Further handling will take place when the kitten is treated with IV fluids, anti-inflammatories and antibiotic medication. The IV will restrict the kitten's movement, especially as it starts to recover and cause additional fear.

### **Commentary**

The candidate has shown excellent understanding of the role of the veterinary team. They have analysed and discussed the role of the veterinary team in excellent detail considering how each of these members are involved in the diagnosis, management and treatment of the kitten during its time in the veterinary practice. For example, the veterinary nurse's use of separate cleaning equipment demonstrating safe and welfare-oriented techniques when looking after the kitten.

The candidate has provided an excellent evaluation of the milestones during the journey of the kitten at the veterinary practise and how the visit to the veterinary practise has impacted the welfare of the kitten. The candidate has considered how each stage will affect the overall welfare of the kitten in terms of its natural behaviours and how these will affect the health

condition. For example, they have identified that the presence of other animals and species such as dogs will affect its fear response and vulnerability, and how the health of the kitten could affect other patients due to the contagious nature of its condition.

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