HM Government

T-LEVELS

T Level Technical Qualification in Animal Care and Management:

Occupational Specialism in Animal Management and Science (Level 3)

Science Knowledge Test (8717-411)

Sample mark scheme

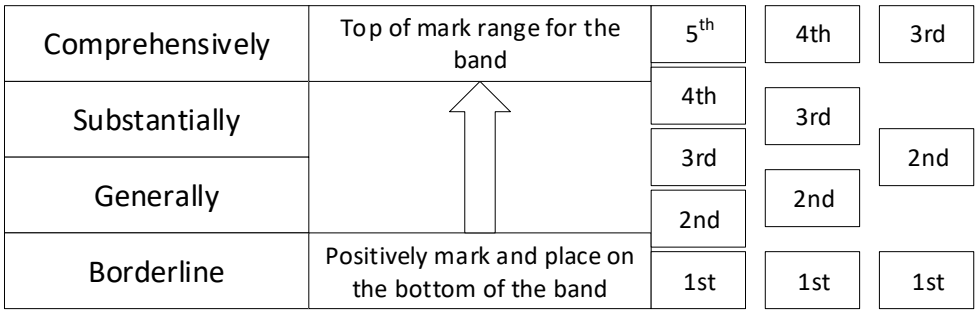
December 2025 v1.1

Version and date	Change detail	Section
1.1 Dec 2025	Amendment to Q17 following BMR calculation specification update	Section C: Q17

Marker guidance

Unless otherwise stated in the marker guidance for a specific question, the following conventions apply:

- All marking, from start to finish must be consistent and in line with the mark scheme guidance. Continue to refer to the mark scheme throughout marking.
- For questions that ask for a specific number of points, accept the first answers given up to the number requested e.g., State three… only accept the first three answers listed, and disregard any additional answers provided.
- For questions requiring continuous prose answers, mark positively – all correct answers should receive the appropriate mark according to the mark scheme. Any wrong (**but neutral**) answers should be ignored, and no marks should be lost.
- In some circumstances, it is appropriate to disallow a candidate answer that initially appears to give the correct answer as given in the mark scheme, if it is undermined by the fact that it goes on to actively **contradict** its intention. Sometimes the minimal wording used in the mark scheme allows a match that in reality is trivial and it is clear the candidate is referring to the wrong knowledge/understanding. Only the part of the response to which the contradiction applies should be disallowed, not the whole response. Material that is irrelevant/neutral but not contradictory should be ignored and positive marking applied as above.
- Use the full range of marks for a question as described by the mark scheme – e.g., for a 2-mark question, 0, 1 or 2 marks will always be available to award (never just 0 or 2). For levels marking, the full range of marks should be used freely as described by the mark scheme including 0 and full marks.
- Always award whole marks; half marks cannot be awarded.
- Allow phonetic misspellings as long as the meaning is clear, i.e., not so similar to another relevant but wrong term that you have to guess which was intended.
- Only allow 'it' as reference to the question topic if it is clear what 'it' refers to.
- Mark crossed out work unless it has been replaced by another response.
- Where judgement is required, apply the guidance. Where the guidance does not sufficiently support for a particular candidate response/interpretation, contact your Team Lead.
- Accept alternative wording that reflects that given in the mark scheme.
- Contact your Team Lead if any additional correct answers arise that need to be added to the mark scheme.
- For level of response mark schemes:
  Note: indicative content has been provided to help orient the marking, providing a sense of the intentions of the question and expected parameters of the response. It is not exhaustive, and candidates do not need to cover all points referenced. Candidates may provide good quality responses while taking an approach which legitimately focuses either on breadth or depth given the time constraints. While the best responses are more likely to go to some depth across a broader range, there will be acceptable variation. Any pointers in the question towards coverage e.g. '…a range of…' should be kept in mind and balanced, through professional judgement, as to how much this affects the overall quality of the response when applying the marking instructions.
    - First, read the full candidate response and decide which band descriptor best fits the overall level of quality of the response, in the context of the indicative content.
    - Then, to decide on a mark within the band, consider the ***degree to which*** **the response fits the criteria**, as indicated by the diagram below:



The table below provides further detail on the descriptors used within each of the mark bands and what is expected at each level. Use the descriptors below alongside the mark scheme to support accurate and consistent judgement of a candidate's response and allocation of marks.

AO2	**AO3**
Basic	
Limited understanding that is relevant to the context or question. Limited accuracy in interpretation through lack of application of relevant knowledge and understanding.	Limited accuracy in analysis through lack of application of relevant knowledge and understanding. Unsupported evaluation through lack of application of knowledge and understanding. Unsupported judgement through lack of application of knowledge and understanding.
Good	
Some understanding that is relevant to the context or question. Some accuracy in interpretation through the application of some relevant knowledge and understanding.	Some accuracy in analysis through the application of some relevant knowledge and understanding. Partially supported evaluation through the application of some relevant knowledge and understanding. Partially supported judgement through the application of some relevant knowledge and understanding.
Thorough	
A range of accurate understanding that is relevant to the context or question. Accurate interpretation through the application of relevant knowledge and understanding.	Accurate analysis through the application of relevant knowledge and understanding. Supported evaluation through the application of relevant knowledge and understanding. Supported judgement through the application of relevant knowledge and understanding.
Comprehensive	
A range of detailed and accurate understanding that is fully relevant to the context or question. Detailed and accurate interpretation through the application of relevant knowledge and understanding.	Detailed and accurate analysis through the application of relevant knowledge and understanding. Detailed and substantiated evaluation through the application of relevant knowledge and understanding. Detailed and substantiated judgement through the application of relevant knowledge and understanding.

This exam has been split into **three** 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 **36** marks and includes **8** short answer and medium answer questions.

Section B is made up of **24** marks and includes **7** short answer and medium answer questions.

Section C is made up of **20** marks and includes **2** short answer and medium answer questions and **1** extended response question.

Assessment Objectives	Mark allocation
AO1a Demonstrate knowledge The ability to demonstrate knowledge of animal science principles, concepts, theories and methods.	**50%**
AO1b Demonstrate understanding The ability to demonstrate understanding of animal science principles, concepts, theories and methods.	
AO2 Apply knowledge and understanding to different situations and contexts Using and applying knowledge and understanding to animal science principles, concepts, theories and methods. • in a theoretical context • in a practical context	**40%**
AO3 Analyse and evaluate information and issues Analysis and evaluation of animal science principle, concepts, theories and methods. • in a theoretical context • in a practical context	**10%**

Section A

Q1	a) Identify **two** characteristics of mammals (2 marks) b) Give **one** example of a characteristic that is an exception in some mammals and give **one** example of a species with this characteristic. (2 marks)	
Mark scheme	a) • Fur/hair (1) • Mammary glands (1) • Endothermic/warm-blooded (1) • Vertebrate (1) b) • Live on land (1) dolphin/whale (1) • Viviparous/live young (1) platypus (1)	**Marking guidance** a) Award **1 mark** for each correct answer up to a maximum of **2 marks**. b) Award **1 mark** for the correct characteristic and a further **1 mark** for an example species up to a maximum of **2 marks.** Accept the opposites to the characteristics in part b) – live in water, egg laying/oviparous.
Total marks	4	
AO	AO1a – 2 marks AO1b – 2 marks	
Qual spec reference	2.2 Animal classification	

Q2	State **three** causes of induced mutations. (3 marks)	
Mark scheme	• Mutagen (1) • UV light (1) • Heavy metals (1) • Nuclear radiation (1) • X-rays (1)	**Marking guidance** Award **1 mark** for each correct answer up to a maximum of **3 marks.** Credit any other appropriate response.
Total marks	3	
AO	AO1a	
Qual spec reference	2.20 Types of mutations	

Q3	Identify **two** processes which take place during the metaphase stage of mitosis. (2 marks)	
Mark scheme	• The chromosomes line up in the centre/equator of the cell (1) • The spindle fibres attach to the centromeres (1)	**Marking guidance** Award **1 mark** for each correct answer up to a maximum of **2 marks**.
Total marks	2	
AO	AO1a	
Qual spec reference	2.18 Mitosis and meiosis and their stages	

Q4	Identify **one** of the enzymes involved in transcription and explain its role within the process of DNA replication. (3 marks)	
Mark scheme	• Helicase (1) moves along the DNA in a 3' to 5' direction (1) to unwind the existing strands ready for replication to make two new strands (1) • DNA polymerase (1) moves along the DNA in a 3' to 5' direction (1) adding complementary nucleotides to the existing strand to make a new strand (1) • Primase (1) attaches to the existing strand of DNA in the 5' to 3' direction (1) to add a primer for the DNA polymerase to start adding nucleotides to (1) • Ligase (1) moves along the lagging strand of DNA in the 5' to 3' direction (1) to join together the Okazaki fragments to make a complete strand (1)	**Marking guidance** Award **1 mark** for a correct enzyme and up to **2 additional marks** for the explanation of its role up to a maximum of **3 marks**. Credit any other appropriate response with alternative wording that reflects what is given in the mark scheme.
Total marks	3	
AO	AO1a – 1 mark AO1b – 2 marks	
Qual spec reference	2.17 DNA replication	

Q5	Explain **three** differences between the structure of animal DNA and RNA. (6 marks)	
Mark scheme	• RNA is single stranded (1) whereas DNA is a double helix shape/double stranded (1) • DNA double strands are held together with hydrogen bonds (1) whereas single stranded RNA doesn't require hydrogen bonds (1) • In DNA Adenine pairs with Thymine (1) whereas in RNA Adenine pairs with Uracil (1) • DNA has a deoxyribose sugar (1) whereas RNA has a ribose sugar (1)	**Marking guidance** Award **1** mark for an explanation of a characteristic of the structure and award **1 further mark** for the explanation of the differing characteristic to a maximum of **2 marks**. Award a maximum of **6 marks** for three differences fully explained. Full marks for each difference can only be awarded where the second point expands upon, and is related to, the first point. Do NOT accept: abbreviations for nucleotide bases (A and T / C and G / U)
Total marks	6	
AO	AO1b	
Qual spec reference	2.16 DNA and RNA structure and function	

Q6	The dominant creeper gene produces abnormally short legs in chickens. The recessive allele is a lethal gene. Explain **two** implications to the F1 generation in terms of the lethal gene, if two heterozygous parent chickens were mated. (4 marks)	
Mark scheme	• Offspring will therefore be heterozygous and homozygous (1) because both parents give one dominant and one recessive allele (1) • The offspring with a dominant allele will have abnormally short legs but will not die (1) because the dominant allele masks the recessive lethal gene (1) • Offspring that are homozygous recessive will die (1) because they have two copies of the lethal gene (1)	**Marking guidance** Award **2** marks for each correctly explained implication up to a maximum of **4 marks.** Award **1 mark** for a basic explanation and award **1 further mark** for a further developed explanation. Award a maximum of **4 marks** for two implications fully explained.
Total marks	4	
AO	AO2	
Qual spec reference	2.19 Mendelian inheritance 2.21 Gene interactions	

Q7	In mice, long tails (T) are dominant to short tails (t) and black hair (B) is dominant to white hair (b). These traits are independent of each other. A male mouse of genotype Ttbb is crossed with a female mouse of genotype ttBb. Using the information provided, identify the gametes using the FOIL method and complete the Punnett square, giving the predicted genotypic and phenotypic ratios from the cross. (8 marks)

<table>
<tr>
<td>Mark scheme</td>
<td>

Determination of gametes using FOIL method – Tb, Tb, tb, tb (1) X tB, tb, tB, tb (1)
Correct use of Punnett square (2)

<table>
<tr><td></td><td>Tb</td><td>Tb</td><td>tb</td><td>tb</td></tr>
<tr><td>tB</td><td>TtBb</td><td>TtBb</td><td>ttBb</td><td>ttBb</td></tr>
<tr><td>tb</td><td>Ttbb</td><td>Ttbb</td><td>ttbb</td><td>ttbb</td></tr>
<tr><td>tB</td><td>TtBb</td><td>TtBb</td><td>ttBb</td><td>ttBb</td></tr>
<tr><td>tb</td><td>Ttbb</td><td>Ttbb</td><td>ttbb</td><td>ttbb</td></tr>
</table>

Genotypic ratio – TtBb x4, ttBb x4, Ttbb x4, ttbb x4 (1) 4:4:4:4 (1)
Phenotypic ratio – Long tail, Black x4, Long tail, White x4, Short tail, Black x4, Short tail, White x4 (1) 4:4:4:4 (1)

</td>
<td>
Marking guidance
Award 1 mark for each set of correct gametes up to a total of 2 marks.

When marking the Punnett square, 1 mark is for inputting the gametes correctly, 1 mark is for filling in the crosses.
(Allow one error in the Punnett square to get 2 marks.)

Accept crosses where the format of the genotype is incorrect (bB instead of Bb).

Award 1 mark for the written genotypes and their frequency and 1 mark for the ratio.

Award 1 mark for the written phenotypes and their frequency and 1 mark for the ratio.

Award up to a maximum of 8 marks.
</td>
</tr>
<tr><td>Total marks</td><td colspan="2">8</td></tr>
<tr><td>AO</td><td colspan="2">AO2</td></tr>
<tr><td>Qual spec reference</td><td colspan="2">2.19 Mendelian inheritance</td></tr>
</table>

Q8

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
Number of African tourists	130,000	180,000	80,000	50,000	200,000
Number of tourists from other continents	1,500,000	1,800,000	500,000	0	2,000,000
Number of Gorilla deaths due to zoonotic disease	24	32	56	9	22
Number of Gorillas hunted/poached	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)

Mark scheme

Band	Marks	Descriptor
3	**5-6**	Demonstrates thorough application of knowledge and understanding of the mitigations to human interference in order to prevent species extinction. Reasoning for the mitigations is highly detailed and relevant.
2	**3-4**	Demonstrates good application of knowledge and understanding of the mitigations to human interference in order to prevent species extinction. Reasoning for the mitigations is mostly detailed and relevant.
1	**1-2**	Demonstrates basic application of knowledge and understanding of the mitigations to human interference in order to prevent species extinction. Reasoning for the mitigations is presented with limited detail and relevance.
	0	**No relevant material**

Indicative content

- To help prevent illegal hunting and poaching the Rwandan government could increase border patrols between the countries to help stop the poachers from entering the country and poaching the Gorillas.

	• The Volcanoes National Park itself could be fenced and gated with manned entry points to prevent unauthorised access to the park, preventing access to hunters/poachers and tourists. • More regular patrols by Volcanoes National Park Staff could occur to help look for traps and snare devices that may be being used to entrap the Gorillas. • Camera traps could be set to help identify poachers/hunters or discourage them from entering the National Park, meaning that areas where patrols cannot always reach will still be manned. • During times when human disease is known to be high, such as the covid pandemic, the Park should prevent tourist entry to protect the Gorillas from zoonotic disease. For example, the table shows when there were no foreign tourists in 2021 there was a large reduction in Gorilla deaths from zoonotic disease. • Volcanoes National Park should also mandate that face coverings should continue to be worn when visiting the Gorillas to prevent spread of zoonotic diseases. As the year after the pandemic, when face coverings were likely still in use by many people, the data showed a reduced number of Gorilla deaths by zoonotic disease in comparison to pre-pandemic years. • The distance between the tourists and Gorillas should also be controlled by the National Park as greater distances will help to prevent spread of disease by air droplets and reduce deaths by zoonotic disease. • Guards and patrols should be increased to ensure there is a presence in the park at all times to help prevent poaching/hunting. The years of the pandemic is a good example as these were also the highest years for hunting/poaching which may have been because of less tourist presence, allowing more hunters/poachers to get into the park unseen. • Making it mandatory for all forest walks and tours to be led by the National Park staff will help to limit footfall from the increased numbers of tourists in areas that are not designated paths. Wandering off of the paths will cause further deforestation and habitat destruction which will mean there is less space for the Gorillas to live in leading to extinction. • Fines for littering could be introduced in order to help prevent tourists dropping any rubbish when on a forest walk to see the Gorillas. Litter can be detrimental to the health of the Gorillas if they were to ingest it so this would help to keep them safe. • The Park could introduce a non-invasive vaccination programme for the Gorillas or restrict visitors who have not been vaccinated against zoonotic disease such as covid or influenza to prevent disease transmission. • Education programmes for Burundi and Congo could be offered to help make them understand the importance of protecting the Gorillas instead of hunting them. This may reduce the amount of illegal activities that occur.
Total marks	6
AO	AO2
Qual spec reference	2.3 Evolution and natural selection of common wild and captive animals

Section B

Q9	State **three** chemical factors that affect rates of reaction. (3 marks)	
Mark scheme	• Concentration of reactants (1) • Particle size/surface area (1) • Bond strength (1) • Enzyme action (1) • Catalysts (1) • Presence of inhibitors (1)	**Marking guidance** Award **1 mark** for each correct answer up to a maximum of **3 marks**.
Total marks	3	
AO	AO1a	
Qual spec reference	5.10 Rates of reaction and catalysts	

Q10	Identify the type of bond that will be formed between group 1 and group 7 of the periodic table. (1 mark)	
Mark scheme	• Ionic bonding (1)	**Marking guidance** Award **1 mark** for a correct answer. Accept: ionic.
Total marks	1	
AO	AO1a	
Qual spec reference	5.14 Atomic structure and the periodic table	

Q11	Explain **two** effects denaturation has on enzyme activity. (4 marks)	
Mark scheme	• Denaturation causes the enzyme structure/receptor site to change (1) so the lock and key/induced fit receptor will not fit (1) • Denaturation can break the hydrogen bonding in the enzymes structure (1) which prevents it catalysing the reaction (1) • Denaturation can damage the shape of active site of the enzyme (1) which will result in a decreased speed of reaction (1)	**Marking guidance** Award **2** marks for each correctly explained effect up to a maximum of **4 marks.** Award **1** mark for an explanation of a characteristic of denaturation and award **1 further mark** for the explanation of the effect to a maximum of **2 marks**. Award a maximum of **4 marks** for two effects fully explained. Full marks for each effect can only be awarded where the second point expands upon, and is related to, the first point.
Total marks	4	
AO	AO1b	
Qual spec reference	5.11 How enzymes and their properties can be used in reactions	

Q12	Explain **one** effect of **each** of the following on the establishment of chemical equilibrium. a) Temperature. (2 marks) b) Catalysts. (2 marks)	
Mark scheme	a) • When the temperature is increased and the yield of products is decreased (1) the equilibrium moves to favour the exothermic reaction (1) • When the temperature is increased and the yield of the products is increased (1) the equilibrium moves to favour the endothermic reaction (1) b) • A catalyst does not take part in the reaction but lowers the activation energy and speeds up chemical reactions (1) which means that the equilibrium will be established more quickly (1)	**Marking guidance** a) Award **1** mark for an explanation of a change to the temperature and award **1 further mark** for the explanation of the movement of the equilibrium to a maximum of **2 marks**. Award a maximum of **2 marks** for one full explanation. b) Award **1** mark for an explanation of the role of the catalyst and award **1 further mark** for the explanation of the movement of the equilibrium to a maximum of **2 marks**. Award a maximum of **2 marks** for one full explanation. Award up to a maximum of **4 marks.** Credit responses in a) relating to the correct effect of decreasing the temperature.
Total marks	4	
AO	AO1b	
Qual spec reference	5.12 Dynamic nature of equilibrium	

Q13	Summarise **three** of the steps that occur during the chemical reaction of glycolysis. (6 marks)	
Mark scheme	• Two phosphate molecules are added to one molecule of glucose (1) using two ATP molecules (1) • This creates phosphorylated glucose (1) and two ADP molecules (1) • This six-carbon molecule is split into two triose phosphate molecules (1) and NAD is turned into reduced NAD (1) • Four ADP molecules are added to phosphate (1) producing ATP and pyruvate (1)	**Marking guidance** Award **1 mark** for a simple step of glycolysis and award 1 **further mark** for expanding upon the point to a maximum of **2 marks**. Award a maximum of **2 marks** for one full summary of a step. Award up to a maximum of **6 marks** for three steps fully summarised.
Total marks	6	
AO	AO1b	
Qual spec reference	5.13 Cellular respiration	

Q14	One of the gases used in a laboratory for Bunsen burners is Propane (C_3H_8). When burnt with Oxygen (O_2) it produces Carbon Dioxide (CO_2) and Water (H_2O). Use these chemical formulae notations to work out the balanced equation for the combustion of Propane. (2 marks)	
Mark scheme	• $C_3H_8 + 5O_2(1) \rightarrow 3CO_2 + 4H_2O$ (1)	**Marking guidance** Award **1 mark** for each side of the balanced equation up to a maximum of **2 marks**.
Total marks	2	
AO	AO2	
Qual spec reference	5.15 Chemical bonding, balancing equations and biochemical reactions	

Q15	A vet has recommended that the abrasions on a rabbit's foot are rinsed in a 2M salt water solution to assist healing. Instructions are given to the veterinary nurse to make up the solution. Using the periodic table in Appendix 1, calculate the amount of sodium chloride (NaCl) that the veterinary nurse would need to add to 1 litre of water to make a 2M solution to 1.d.p. Show your workings. (4 marks)	
Mark scheme	• Na – 22.990 (1) • Cl – 35.453 (1) • 1M in 1L = 22.990 + 35.453 1M in 1L = 58.443g (1) • 2M in 1L = 58.443 x 2 2M in 1L = 116.886g of NaCl 2M in 1L = 116.9g of NaCl to 1.d.p (1)	**Marking guidance** Award **1 mark** for the correct atomic mass of Na Award **1 mark** for the correct atomic mass of Cl Award **1 mark** for calculating g in 1M solution Award **1 mark** for calculating g in 2M solution Award up to a maximum of **4 marks.**
Total marks	4	
AO	AO2	
Qual spec reference	5.17 Mass, molarity and solutions	

Section C

Q16	Identify and describe **two** techniques of medicine administration. (4 marks)	
Mark scheme	• Enteral (1) – giving tablets by mouth/orally (1) / giving suppositories into the rectum (1) • Topical parenteral (1) – giving a topical/local treatment (1) • Parenteral (1) – giving an injection under the skin/subcutaneous (1) / giving an injection into the muscle/intramuscular (1) / giving an injection into the vein/intravenous (1) • Inhalation (1) – giving a liquid medication up the nose/nasal passage (1)	**Marking guidance** Award **1 mark** for each correct technique identified up to a maximum of **2 marks.** Award **1 mark** for each correct description of the administration technique up to a maximum of **2 marks.** The description must be linked to the correct administration technique when awarding marks. Accept topical as an alternative to topical parenteral.
Total marks	4	
AO	AO1a – 2 marks AO1b – 2 marks	
Qual spec reference	3.6 Medicine types, storage and administration	

<table>
<tr><td>Q17</td><td colspan="2">An adult Labrador weighs 27kg. Using the correct formulae below calculate

RER (over 5kg) = (30 x bodyweight in kg) + 70kcal
BMR ≈ 70 x $M^{0.75}$ - where M is the mass in kg

a) the resting energy requirements of the Labrador. Show your workings. (2 marks)
b) the basal metabolic rate of the Labrador. Show your workings. (2 marks)</td></tr>
<tr><td>Mark scheme</td><td>a)
• RER (over 5kg) = (30 x 27) + 70kcal or RER = (810) + 70kcal (1)
• RER = 880 kcal/day (1)
b)
• BMR ≈ 70 x $27^{0.75}$ or BMR ≈ 70 x 11.8447 (1)
• BMR= 829.13 kcal/day (1)</td><td>Marking guidance

a)
Award 1 mark for the calculation of the RER.
Award 1 mark for the correct RER and unit.
b)
Award 1 mark for the calculation of the BMR
Award 1 mark for the correct BMR value and unit.

Award up to a maximum of 4 marks.</td></tr>
<tr><td>Total marks</td><td colspan="2">4</td></tr>
<tr><td>AO</td><td colspan="2">AO2</td></tr>
<tr><td>Qual spec reference</td><td colspan="2">3.4 Nutritional requirements and formulating feeding plans</td></tr>
</table>

Q18	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)

Mark scheme

Band	Marks	Descriptor
4	**10-12**	Demonstrates comprehensive application of knowledge and understanding of the role of the veterinary team in relation to the diagnosis, management and treatment of the kitten and how animal welfare can be impacted by their journey through the practice. Demonstrates comprehensive use of analysis of the role of the veterinary team in relation to the diagnosis, management and treatment of the kitten. Demonstrates comprehensive evaluative skills by evaluating an excellent range of milestones of the kitten's journey through the practice. Links to the kitten's welfare are supported with highly detailed and relevant reasoning.
3	**7-9**	Demonstrates thorough application of knowledge and understanding of the role of the veterinary team in relation to the diagnosis, management and treatment of the kitten and how animal welfare can be impacted by their journey through the practice. Demonstrates thorough use of analysis of the role of the veterinary team in relation to the diagnosis, management and treatment of the kitten. Demonstrates thorough evaluative skills by evaluating a thorough range of milestones of the kitten's journey through the practice. Links to the kitten's welfare are supported with mostly detailed and relevant reasoning.
2	**4-6**	Demonstrates good application of knowledge and understanding of the role of the veterinary team in relation to the diagnosis, management and treatment of the kitten and how animal welfare can be impacted by their journey through the practice. Demonstrates good use of analysis of the role of the veterinary team in relation to the diagnosis, management and treatment of the kitten.

		Demonstrates good evaluative skills by evaluating a good range of milestones of the kitten's journey through the practice. Links to the kitten's welfare are supported with some detailed and relevant reasoning.
1	**1-3**	Demonstrates basic application of knowledge and understanding of the role of the veterinary team in relation to the diagnosis, management and treatment of the kitten and how animal welfare can be impacted by their journey through the practice. Demonstrates basic use of analysis of the role of the veterinary team in relation to the diagnosis, management and treatment of the kitten. Demonstrates basic evaluative skills by evaluating a limited range of milestones of the kitten's journey through the practice. Links to the kitten's welfare are supported with limited detail and relevant reasoning.
	0	**No relevant material**

Indicative content

Role of veterinary team:

- The receptionist will check in the animal and settle them in the mixed waiting room while waiting for the consultation. They will also take payment and arrange any follow up or discharge appointments.
- When in the consulting room, the veterinary surgeon will do a full physical examination of the kitten and will identify signs and symptoms related to cat flu which are – ocular discharge, conjunctivitis, nasal discharge, sneezing, oral ulceration, lymph node enlargement, breathing difficulties, anorexia/inappetence, weight loss, dehydration, lethargic.
- The veterinary surgeon will ask the owner about the history of the kitten – appetite, thirst, behaviour, bodily functions, vaccination history.
- Consent forms from the owner to hospitalise the animal and be able to administer treatment is given by the veterinary surgeon to ensure that the owner gives fully informed consent.
- The veterinary surgeon is the only staff member allowed to diagnose, prescribe and treat the kitten under the Veterinary Surgeons Act 1966. Section 3 of the Act allows for exemptions for other personnel to carry out first aid to prolong life and for a qualified veterinary nurse to act under the direction of the veterinary surgeon for treatment purposes as long as they are not entering a body cavity.
- The kitten is given to the veterinary nurse who will make up the isolation kennel and settle the animal in.
- The kitten will be looked after by the nursing team, either a qualified or student veterinary nurse for day-to-day care and monitoring.
- The veterinary surgeon or the qualified veterinary nurse will discharge the kitten back to its owner at the end of the hospitalisation period and talk through ongoing medication – they may also have a follow up appointment.
- One veterinary nurse would be responsible for the care to ensure barrier nursing procedures are followed and prevent spread of the disease to other animals within the practice.

	• This includes the cleaning protocols and biosecurity of the kitten, designated equipment, and enclosure to prevent cross contamination. • The veterinary nurse would monitor the kitten and fill in the daily hospitalisation sheet during the treatment process. • The veterinary surgeon will outline the treatment and nursing care plan for the kitten. The intravenous drip is given to prevent dehydration. The antibiotics will help fight any secondary bacterial infections. The anti-inflammatories will help as pain relief, lower any fever and lower any inflammation in the mucous membranes to enable the kitten to feel better and breathe more easily. These are prescribed by the veterinary surgeon but can be administered by a veterinary nurse under their guidance and direction. • The veterinary nurse will provide nursing care – cleaning their face, bathing their eyes, and encouraging them to eat but will not provide treatment as under the Veterinary Surgeons Act 1966, only the veterinary surgeon can diagnose and prescribe treatment, but a qualified veterinary nurse may give oral, topical, intravenous, and subcutaneous medication under the direction of the vet. • Student veterinary nurses may assist the qualified veterinary nurse in the day-to-day care if they are allocated to the isolation section. **Evaluation of journey:** • Using cat friendly handling throughout the journey to avoid scruffing or crush cages to ensure good welfare is shown at all times. • The kitten is sitting in a mixed waiting room with its owner, this means that it may be around any other species – this could be detrimental to its welfare due to fear of dogs or going into prey drive for rodents. • The most common species that would also be in the waiting room is likely to be dogs, which may cause distress to the kitten as it is uncommon for a cat to be used to the presence of a dog, especially if the dogs are not used to the presence of a cat (they may bark, or snarl). • The mixed waiting room may also hold small mammals and rodents which would naturally be prey animals for the kitten (the need to express normal behaviour), so this could cause the kitten to become distressed that it is not able to get to them. This goes against the need to be protected from pain, injury, suffering and disease in the Animal Welfare Act 2006. • The risk to other cats in the waiting room is also very high as cat flu is an airborne infectious disease. • On the other hand, if the kitten is used to a busy household or living environment, this may cause more stress. • When the kitten goes into the cat only consulting room, this will help it to feel more settled as the only smells will be of other cats, and no predatory or prey species. • Using the isolation section of the veterinary surgery for the kitten when it is an inpatient, will also allow for the kitten to be as settled as possible, even though it will be in a strange environment. • During the discharge appointment the kitten will feel more settled when it sees its owner due to it recognising their smell which is good for its welfare.
Total marks	12
AO	AO2 = 4 AO3 = 8
Qual Spec Ref	3.6 Medicine types, storage and administration 3.7 The veterinary practice, roles within it and veterinary terminology 3.8 Pathogens and animal disease and disorders at different life stages

Copyright in this document belongs to, and is used under licence from the Department for Education, © 2023 - 2026.

‘T-LEVELS’ and ‘T Level’ are registered trade marks of the Department for Education.

© City & Guilds Limited is authorised by the Department for Education to develop and deliver this T Level Technical Qualification.

City & Guilds is a registered trade mark of © City & Guilds Limited.