



Qualification name: Level 3 Animal Management Technical (0172-30/31/32/33)

Exam name: 0172-520 Level 3 Animal Management – Theory Exam

Exam Version Name: June 2017

Exam date: 22/06/17

Exam start time: 13:30

Exam finish time: 15:00

Base mark: 60

**You should have the following for this assessment**

- A pen with blue or black ink

**General instructions**

- Use black or blue ball-point pen.
- The marks for questions are shown in brackets.
- This examination contains 11 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.

### Question 1

Select **two** needs that must be provided under the Animal Welfare Act 2006 **and** explain how meeting these needs benefits the animal.

**Indicative content:** 1 mark for each benefit aligned to a need, maximum 1 mark

#### Needs:

- Its need for a suitable environment:
- its need for a suitable diet:
- its need to be able to exhibit normal behaviour patterns,
- any need it has to be housed with, or apart from, other animals, and
- Its need to be protected from pain, suffering, injury and disease.

#### Benefits:

**Provide physical well-being** (ample space to move around, correct ventilation, predator prey animals, ensure correct weight and condition, to ensure it is not hungry, reduce digestive disorders, dehydration, obesity, energy etc.)

Any other appropriate answer.

**provide mental well-being:** (create a more natural environment, social or gregarious species, reduce stress)

Any other appropriate response.

**Total marks: 2 marks**

## Question 2

State **three** considerations when administering medication.

**Indicative content:** 1 mark for each relevant consideration

- Routes of medicine administration (1) to include topical, enteral, and parenteral and. oral, intramuscular, intravenous, enema, nasal, subcutaneous, tubing or any other suitable answer
- Frequency of drug administration (1) depending upon the drug choice and route (1)
- Suitably qualified person (SQP) (1)
- Assessing animal for adverse reactions (1) and the action to take with a suspected reaction (1)
- Restraint techniques.(1)
- Safe disposal of equipment (1)
- Fill in records (1)
- Wash hands (1)

Any other appropriate response

**Total marks: 3 marks**

## Question 3

Suggest **two** different appropriate actions that should be taken after **each** of the following first aid situations

- a. convulsions
- b. poisoning
- c. burns and scalds
- d. haemorrhage.

**Indicative content:** 1 mark for identifying **two** different appropriate actions for **each** situation

- a. Stay present with animal at all times ensuring its safety (1), quiet and dark area (1), monitor and time convulsions (1)
- b. Gain case history(1), look for abnormal signs (1)
- c. Apply cold water (1), ascertain situation (1)
- d. Apply pressure with suitable materials i.e. not adhesive (1), seek veterinary advice (1)

Any other appropriate response

**Total marks: 4 marks**

#### Question 4

Describe **one** sign/symptom **and** explain **one** suitable treatment for **each** of the following nutritional disorders.

- a. Obesity.
- b. Diabetes.
- c. Constipation.
- d. Calcium deficiency.

**Indicative content:** 1 mark for the sign/symptom **and** 1 mark for the treatment, maximum 2 marks for each disorder

- a. **Signs:** overweight (1), out of breath (1), sweating,(1) lack of energy (1);  
**Treatment:** restricted diet with lower fat (1), cutting out titbits/treats (1), increase in exercise regime (1)
- b. **Signs:** excessive drinking or dehydration (1), change in appetite (1), weight loss (1), increased urination (1), unusually sweet-smelling or fruity breath (ketosis) (1), lethargy (1).  
**Treatment:** regular blood glucose checks to monitor range or level (1), controlled diet to insure low sugar level of food (1), insulin injections to allow glucose to be absorbed (1)
- c. **Signs:** difficulty passing faeces (1), bloated, hard abdomen (1).  
**Treatment:** stool softener or other laxative agent allow passage (1), medication to increase the contractile strength of the large intestine to encourage bowel movement (1), adding fibre to diet to encourage bowel movement (1), enema to flush the large intestine (1)
- d. **Signs:** uncoordinated or stiff gait (1), weakness (1), bone deformity (1), recumbancy (1)  
**Treatment:** dietary supplement of calcium (in various forms for administration) (1), sunlight or UV increase to encourage Vitamin D production (1)

Any other appropriate response

**Total marks: 8 marks**

**Question 5**

Give **one** example of how food is digested in an animal's body using **each** of the following processes.

- a. Mechanical/physical. (1 mark)
- b. Chemical. (1 mark)
- c. Microbial.(1 mark)

**Indicative content:** 1 mark for each example given, maximum 1 mark for process.

- a. Chewing food (1), also allow muscular contractions in the gut (physical) (1)
- b. Enzymes - catabolism, (1) alkaline and acid secretions (1)
- c. Bacteria – fermentation in the hind gut/caecum or rumen (1)

Any other appropriate response

**Total marks: 3 marks**

**Question 6**

Define the term anorexic.

**Indicative content:** A condition where the animal has loss of appetite or refusal to eat.

Any other appropriate response

**Total marks: 1 mark**

### Question 7

Explain how ruminants have adapted to digest fibre.

**Indicative content:** 4 marks for explaining different adaptations in digestion or going into detail about one adaptation.

#### **Biological aspects**

Fermentation - broken down by bacteria in rumen (1), regurgitation and chewing cud production of VFA,(1) slow releasing form of energy (1), four chambered stomach (1)

*or*

If candidate explains each chamber of the stomach, 1 mark awarded for each

*or*

#### **Adaptations**

Candidates have the option to discuss how animals have adapted with four marks available for any suitable answer, for example: some ruminants could have mutated (1), adapting to the environment that they live in (1), survival of the fittest (1).

Any other appropriate response

**Total marks: 4 marks**

### Question 8

**8a)** Define the term dry matter.

**Indicative content:** dry weight of food with moisture removed (1)

No mark awarded for dry food only.

**8b)** The average voluntary food intake (appetite) of the sheep is 2.5% of body weight. Calculate the appetite of the following

- i) 50 kg sheep
- ii) 80 kg sheep.

**Indicative content:** 1 mark for correct answer with or without method shown

No mark awarded for not adding the unit (kg)

- i)  $(50 \times 2.5 \div 100 =) 1.25 \text{ kg (1)}$
- ii)  $(80 \times 2.5 \div 100 =) 2 \text{ kg (1)}$

**Total marks: 3 marks**

**Question 9**

Evaluate **three** factors that should be considered in the feeding plan for a geriatric animal.

**Indicative content:** 1 mark for any of the following explanations, maximum 3 marks

- Provision of fresh water and method of delivery for a geriatric animal because it needs water for joints (1), to prevent choking on food etc. (1)
- quantities and type (fresh/dry) given to maintain weight, (1) because the animal is likely less exercise (1), loss of teeth and may be unable to chew (1) Palatability needs to be increased due to lack of appetite (1)
- use of supplements (special dietary requirements) could be low on calcium, nutrients, (1) and be unable to take in all major nutrients or fibre (1)
- frequencies and timings - Geriatric require being fed more often due to lack of appetite (1), meals should be divided into smaller portions to aid digestion (1)
- enrichment - Geriatric animals less enthusiastic feeders (1). Can stimulate animal to relieve boredom (1). Cannot be too complicated as it will confuse the animal (1)
- general health - Specific diets may be needed for certain illnesses (1) for example Hills Canine C/D can assist with bladder stones (one mark would be awarded for any suitable example)(1)

Any other appropriate response

**Total marks: 3 marks**

**Question 10**

Describe **three** natural behaviours of a named animal during courtship.

**Indicative content:** 1 marks for any of the following descriptions of natural behaviour relating to courtship, maximum 3 marks

- Bird – Singing to attract a mate (1), Bright plumage to demonstrate fitness (1) , diving to demonstrate parental ability (1) , head nods as a display to attract mates attention (1) , wing flaps to attract attention of possible mate (1)
- Mammal – fighting / competing with males to prove strength (1), inflating chest to demonstrate size and strength (1), chest beating to communicate power (1), vocalisation to attract mate (1), sniffing to check if mate is receptive (1), grooming to bond with mate (1), playing to attract mates attention (1), dance/perform to demonstrate fitness to mate (1)

Any other appropriate response

**Total marks: 3 marks**

**Question 11**

Describe **one** link between the environment and the behaviour of the bat.

**Indicative content:** 1 mark for any of the following:

**A Pipistrelle Bat:**

Uses echolocation to enable night time hunting,(1)

Roost in cool dark safe structures to avoid predators,(1)

Lives communally to aid survival habitat, (1)

Hangs upside down to avoid predators, (1)

Hibernates in winter when food supply is limited (1)

**A Fruit bat:**

Can be diurnal and roost in trees (1)

Does not hibernate (1)

Any other appropriate response.

**Total marks: 1 mark**



**Question 12**

Compare the behaviour of a bear living in the wild with a bear living in captivity.

**Indicative content:** 1 mark for each comparison, maximum 2 marks

- Wild: exhibits natural behaviour which enables them to hunt, stalk and catch own food,– captive: feed at predetermined times (1)
- Wild: roam over a large territory – Captive: limited space for exercise, (1)
- Wild: create own social groups/mates, - Captive unnatural selection of social group/mates potential for inbreeding, (1)
- Wild: opportunity for hibernation – Captive: Kept awake using artificial heating - can cause atypical behaviour, i.e. pacing, aggression, lethargy, stress, low libido (1)

Any other appropriate response

**Total marks: 2 marks**

**Question 13**

Give **two** examples of how **each** of the following factors can influence the behaviour of animals.

- a. Hormones.
- b. Fixed action patterns.
- c. Seasonal variation of food availability in the wild.

**Indicative content:** 2 marks for two points for each factor, maximum 6 marks

- a. hormones influencing the behaviour – 2 marks awarded for examples of how the behaviour is effected by the hormone, e.g increased aggression during breeding.
- b. redirected behaviours (1), the pointing and herding instincts (1), nest building during parturition (1), hunting instincts (1), pack instincts (1).
- c. limited food supply's induce aggression within the pack (1), survival of the fittest (1), animals gorging on food at the peak of the season (1), hiding food for later (1).

Any other appropriate response

**Total marks: 6 marks**

**Question 14**

Explain **one** possible cause for the near-extinction of the white rhino.  
Emphasis on the cause of extinction in general, rather than specifically the white rhino.

**Indicative content:** 1 mark for one of the following:

Hunting, eg food, horns (1)

Climate change, eg drought, famine (1)

Natural disasters, eg flood, fire (1)

Habitat destruction, eg cultivation of land (1)

Any other appropriate response

**Total marks: 1 mark**

**Question 15**

State **two** requirements of the Animal Boarding Establishments Act 1963.

**Indicative content:** 1 mark for any of the following, maximum 2 marks

- Boarding establishments require a licence to operate (1)
- Must be inspected on a regular basis. (1)
- Non - compliance can result in prosecution and licence being revoked. (1)
- Power of local authorities to prosecute. (1)
- To ensure only approved premises are used. (1)

Any other appropriate response

**Total marks: 2 marks**

**Question 16**

Define the following terms giving **one** example of **each**.

- a. Dystocia.
- b. Post-partum problems.

**Indicative content:** 1 mark for both the definition of term **and** the example

- a. It is a problem which occurs during parturition limiting the female's ability to give birth naturally (1). Examples include: small birth canal, obesity, oversized foetus, weak contractions, hormonal imbalance, breach birth, necrotic foetus (1)
- b. It is a problem that occurs after birth (1) Examples include: retained placenta (1), uterine prolapse (sever haemorrhaging) (1), infection in uterus which can lead to fertility problems (1) mastitis. (1)

Any other appropriate response

**Total marks: 2 marks**

### Question 17

A medium sized juvenile bitch has been purchased as a companion for a geriatric bitch, this has proved to be more difficult than anticipated. The juvenile bitch is highly excitable and is causing the older dog stress resulting in undesirable behaviour patterns. Some advice is required on how to manage the adjustment period for the two dogs to ensure the duty of care and the responsibilities of the owners/carers in relation to suitable current legislation are met.

Outline and justify recommendations to include an appropriate feeding and exercise strategy to minimise health risks, promote wellbeing and improve behaviour.

#### Indicative content:

**Behaviour patterns** (juvenile behaviours – excitability/boisterousness; geriatric behaviours – aggression/elimination/avoidance),

**Health** (possible injuries from fighting/injuries from the juvenile jumping on the older dog/links to diet)

**Feeding** (juvenile – lower energy food, fed little and often/high protein for growth and repair; geriatric – high fibre/low fat/low energy/increased palatability)

**Welfare of animals at different life stages** (juvenile – more exercise requirement/ access to more toys and opportunities for play/could live separately outside; geriatric – extra comfort beds needed/change in routine/provided with safe area to get away from the juvenile)

Links to the duty of care and the responsibilities of owners/carers in relation to suitable current legislation (links to the Animal Welfare Act 2006 and Duty of Care)

#### Banding:

**Band A** (1 – 4 marks) – Basic discussion of feeding and exercise strategies with limited comparison to the different life stages. For the higher marks in this band candidates will have made basic reference to the Animal Welfare Act 2006.

**Band B** (5 - 8 marks) – Comparison of feeding and exercise strategies with links to life stages, wellbeing and behaviour. Identifying the needs of the Animal Welfare Act 2006. For the higher marks candidates state how they will meet the needs of the Animal Welfare Act 2006.

**Band C** (9 - 12 marks) – Detailed comparison of feeding and exercise strategies making clear links to the life stages and justifying the impact on wellbeing and behaviour. Limited links between the five needs and their recommendations. For the higher marks candidates will give detailed justifications on the impact of wellbeing and behaviour. Each of the five needs directly linked to their recommendations.

**Total marks: 12 marks**