

Qualification: 0172-539 Level 3 Advanced Technical Extended Diploma in Animal Management (Zoos) – Theory Exam (2)

2019 (Paper 1)

1	State two functions of the swim bladder of a fish.		
	Acceptable answer(s)	Guidance	Max mks
	<p>1 mark for any of the following, maximum 2 marks:</p> <p>Buoyancy(1)/ respiration(1)/ sound production(1)</p> <p>Accept any other appropriate answer.</p>		2
2	Give three advantages of flaked fish food.		
	Acceptable answer(s)	Guidance	Max mks
	<p>1 mark for any of the following, maximum 3 marks.</p> <p>Suitable for most fish (1); widely available(1); suitable for top feeders(1); suitable for freshwater/ marine aquariums(1), often cheaper than other food types (1).</p> <p>Accept any other appropriate answer.</p>		3
3	Explain why egg depositors often have a high breeding success rate.		
	Acceptable answer(s)	Guidance	Max mks
	<ul style="list-style-type: none"> • Egg depositors clean their eggs (1) to prevent parasites (1) • Egg depositors produce fewer eggs (1) to allow the fish to provide parental care (1) • Egg depositors (often) lay their eggs in caves/pits (1) for protection (1) • Larger eggs (are produced) (1) gives a size advantage (1) • Eggs are often defended by the parents (1) from predation (1) • Both parents are involved in the care of the eggs (1) for increased protection (1) <p>Accept any other appropriate answer.</p>	Maximum of 2 marks for stating characteristics.	6

4	Explain three ethical considerations when importing wild caught fish for a pet shop.		
	Acceptable answer(s)	Guidance	Max mks
	<p>1 mark for any of the following, maximum 3 marks.</p> <ul style="list-style-type: none"> • Depletes wild populations (1) • May not be sustainably sourced (1) • Many may suffer/die due to inappropriate transport (1) • Fish not fit for transportation (condition/health) suffer from stress (1) • Introduction of disease/parasites (to current stock) (1) <p>Accept any other appropriate answer.</p>		3
5	State three possible causes of feather plucking in birds.		
	Acceptable answer(s)	Guidance	Max mks
	<p>1 mark for any of the following, maximum of 3 marks.</p> <p>Stress(1); lack of stimulation/boredom(1); parasites(1); incorrect diet(1); disease (1)</p> <p>Accept any other appropriate answer.</p>		3
6	Describe how a bird skeletal system is adapted to flight.		
	Acceptable answer(s)	Guidance	Max mks
	<p>Less bones (than mammals/reptiles) to be lightweight (1); hollow bones are lightweight(1); hollow bones allow more oxygen to be absorbed into blood for exercise/flight(1); hollow but contain struts/cross walls/honeycomb to provide strength(1); keeled breastbone to anchor wing muscles(1), fusion of bones for strength (1)</p> <p>Accept any other appropriate answer.</p>		5

7	Define the term soft bill.		
	Acceptable answer(s)	Guidance	Max mks
	(Birds whose) beak/bill is designed to eat soft foods/not eat hard foods (1) Accept any other appropriate answer.		1
8	Explain three ways that season can trigger breeding in birds.		
	Acceptable answer(s)	Guidance	Max mks
	Birds will breed where there is an increased availability of food (1) for nutrition for egg production/rearing of offspring (1) Increased availability of nesting materials (1) to create a suitable nest/attract mates (1) Increased day length (1) as light stimulates production of reproductive hormones (1) Increased temperature (1) better chance of survival of eggs/young (1) Decreased temperature (1) causes migration to more favourable climate (1) Accept any other appropriate answer.	1 mark per factor, 1 mark per explanation. Max 3 marks available for factors.	6
9	Define the term ex situ conservation.		
	Acceptable answer(s)	Guidance	Max mks
	Ex-situ conservation – the process of protecting a species outside its natural habitat (e.g. in a zoo) Accept any other appropriate answer.		1

10	State the main purpose of the Zoo Licensing Act 1981.		
	Acceptable answer(s)		Guidance
	To ensure all zoos in the UK are licensed/ to ensure all zoos in the UK are regularly inspected/ to ensure animals are provided with an appropriate environment (1).		Max mks 1
11	Explain four ways that mixed species exhibits in zoos can influence animal welfare.		
	Acceptable answer(s)		Guidance
	<p>Representative of natural habitat (1) to allow animals to exhibit natural behaviours (1) Animal activity levels higher in mixed species exhibits (1) offering more opportunity for interaction (1) Positive interaction between species (1) is a form of enrichment (1)</p> <p>Competition for food/resources (1) causing increased aggression/increased negative interaction (1), Hard to get environmental conditions correct for all species (1) to prevent health issues /stress (1) Increased risk of disease (1) spread between closely related species (1) Malnutrition/obesity (1) hard to monitor dietary intake of all species (1) Breeding (1) less successful due to interference from other species/interbreeding between closely related species (1)</p> <p>Any other appropriate answer.</p>		Max mks 8

12	Describe the risks involved with the chemical sedation and immobilisation of zoo animals.		
	Acceptable answer(s)	Guidance	Max mks
	Physical injury to the animal during immobilisation/recovery (1) Overdose of anaesthetic leading to complications/death (1) Negative reaction to drugs used (1) Hard to reintroduce animal to group after sedation (1) Insufficient dose of drug causing risk of animal waking up and causing injury to staff (1) Hyperthermia/hypothermia related to decreased thermoregulatory ability (1) Risks to humans handling drugs in case of accidental administration (1) Accept any other appropriate answer.		3
13	Explain possible ways that suppliers can impact on a land-based business.		
	Acceptable answer(s)	Guidance	Max mks
	<ul style="list-style-type: none"> • If supplier increases prices then business will need to increase prices(1) or make less profit(1) • If supplier cannot provide goods, business may have to source from alternative suppliers(1), may be more expensive(1), may supply a poorer quality product/service (1), may let customers down therefore losing sales(1) Accept any other appropriate answer.		3
14	State three aims of the Working Time Regulations 1998.		
	Acceptable answer(s)	Guidance	Max mks
	<ul style="list-style-type: none"> • Imposes limits on employee’s hours of work (1) • Employees cannot work more than 48 hours per week (on average) (1) • Employees have the right to a minimum daily rest period between each working day/shift (1) • Employees have the right to a minimum weekly rest period (1) • Employees have the right to annual leave (1) Any other appropriate answer		3

15	For a small zoo, discuss the types of records kept and explain their importance in relation to both keeping animals and running a zoo business.		
	Acceptable answer(s)	Guidance	Max mks
<p>Band 1 (1-4 marks)</p> <p>The learner has given a brief answer which includes limited description of the types of records kept within zoos. Clear gaps in knowledge are evident. Only one aspect of record keeping (animals or business) may have been discussed.</p> <p>For the higher marks in the band, learners have made some attempt to explain the reasons for keeping records in a zoo business. Technical terminology may be used infrequently and not always accurately.</p> <p>Band 2: (5-8 marks)</p> <p>The learner has given a detailed answer which includes description of a range of different types of records kept within zoos. Some gaps in knowledge are evident. Learner has discussed both aspects of record keeping (animals and business).</p> <p>For the higher marks in the band, learners have given valid explanations of the reasons for keeping records in a zoo business. Technical terminology may be used frequently with some minor inaccuracies.</p> <p>Band 3: 9-12 marks</p> <p>The learner has given a comprehensive answer which includes detailed descriptions of a wide range of different types of records kept within zoos. There are few gaps in knowledge evident. Learner has thoroughly discussed both aspects of record keeping (animals and business).</p> <p>For the higher marks in the band, learners have given justified and logical explanations of the reasons for keeping records in a zoo business. Technical terminology is used frequently with few inaccuracies.</p>	<p>Indicative content:</p> <p>Animal considerations:</p> <ul style="list-style-type: none"> • Numbers of animals/species • Births/deaths • Disease monitoring and treatments • Water test readings • Identification of individual animals • Biological data e.g. age, weight, sex • ZIMS <p>Business considerations:</p> <ul style="list-style-type: none"> • Financial records • Physical records • Legal requirements • Monitoring business performance and progress 	12	

