

Environmental and Land-Based Science

General Certificate of Secondary Education

Unit **B495/04/02**: Livestock Husbandry (Higher Tier)

Mark Scheme for June 2012

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This mark scheme is published as an aid to teachers and students, to indicate the requirements of the examination. It shows the basis on which marks were awarded by examiners. It does not indicate the details of the discussions which took place at an examiners' meeting before marking commenced.

All examiners are instructed that alternative correct answers and unexpected approaches in candidates' scripts must be given marks that fairly reflect the relevant knowledge and skills demonstrated.

Mark schemes should be read in conjunction with the published question papers and the report on the examination.

OCR will not enter into any discussion or correspondence in connection with this mark scheme.

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Annotations

Used in the detailed Mark Scheme:

Annotation	Meaning
/	alternative and acceptable answers for the same marking point
(1)	separates marking points
not/reject	answers which are not worthy of credit
ignore	statements which are irrelevant - applies to neutral answers
allow/accept	answers that can be accepted
(words)	words which are not essential to gain credit
words	underlined words must be present in answer to score a mark
ecf	error carried forward
AW/owtte	alternative wording
ORA	or reverse argument

Available in scoris to annotate scripts

	indicate uncertainty or ambiguity
	benefit of doubt
	contradiction
	incorrect response
	error carried forward
	draw attention to particular part of candidate's response
	draw attention to particular part of candidate's response
	draw attention to particular part of candidate's response
	no benefit of doubt

	reject
	correct response
	draw attention to particular part of candidate's response
	information omitted

Subject-specific Marking Instructions

- a. If a candidate alters his/her response, examiners should accept the alteration.
- b. Crossed out answers should be considered only if no other response has been made. When marking crossed out responses, accept correct answers which are clear and unambiguous.

E.g.

For a one mark question, where ticks in boxes 3 and 4 are required for the mark:

Put ticks (✓) in the two correct boxes.

✗
✗

This would be worth 1 mark.

Put ticks (✓) in the two correct boxes.

✓
✗

This would be worth 0 marks.

Put ticks (✓) in the two correct boxes.

✗
✗
✓
✓

This would be worth 1 mark.

- c. The list principle:
 If a list of responses greater than the number requested is given, work through the list from the beginning. Award one mark for each correct response, ignore any neutral response, and deduct one mark for any incorrect response, e.g. one which has an error of science. If the number of incorrect responses is equal to or greater than the number of correct responses, no marks are awarded. A neutral response is correct but irrelevant to the question.

- d. Marking method for tick boxes:

Always check the additional guidance.

If there is a set of boxes, some of which should be ticked and others left empty, then judge the entire set of boxes.

If there is at least one tick, ignore crosses. If there are no ticks, accept clear, unambiguous indications, e.g. shading or crosses.

Credit should be given for each box correctly ticked. If more boxes are ticked than there are correct answers, then deduct one mark for each additional tick. Candidates cannot score less than zero marks.

E.g. If a question requires candidates to identify a city in England, then in the boxes

Edinburgh	
Manchester	
Paris	
Southampton	

the second and fourth boxes should have ticks (or other clear indication of choice) and the first and third should be blank (or have indication of choice crossed out).

Edinburgh			✓			✓	✓	✓	✓	
Manchester	✓	x	✓	✓	✓				✓	
Paris				✓	✓		✓	✓	✓	
Southampton	✓	x		✓		✓	✓		✓	
Score:	2	2	1	1	1	1	0	0	0	NR

Question		CBT	Answer	Mark	Guidance
1	(a)	1	<p>bulk – hay, straw, silage, pulps, grass, maize any suitable example</p> <p>concentrate – growers pellets/meal/cake, milk powder any suitable example</p>	2	<p>any 2 reject pellets alone or course meal ignore 'straights' e.g. barley, wheat</p>
	(b)	2	<p>bulk advantages: B cheap C fills the animal up, F usually produced on the farm;</p> <p>disadvantages: E low levels of nutrients, I nutrient levels uncertain;</p> <p>concentrate advantages: D high levels of nutrients H nutrients levels known;</p> <p>disadvantages: A expensive G usually bought from corn merchants</p>	4	1 mark for a correct advantage and disadvantage max 2 for each feed type
2		3	sperm collected from bull, Sperm diluted, Sperm frozen, sperm defrosted, sperm inserted in cow	4	5 correct for 4 marks, 4 or 3 correct for 3 marks, 2 correct for 2 marks etc
3		4	<p>foot and mouth – viruses mastitis – bacteria ring worm – fungi round worm – parasite</p>	3	4/3 right for 3 marks, 2 for 2, 1 for 1 mark.

Question		CBT	Answer	Mark	Guidance
4	(a)	5	D salmonella	1	
	(b)	6	washing hands; wearing protective gloves; only having healthy stock; keeping housing clean/dry	1	any 1
5		7	antibiotics or example of	1	
6		8	<p>same – two of: dry, well ventilated; water supply; draught free OWTTE</p> <p>different – two of: size; gate/door type pig arc movable OWTTE</p>	4	<p>reject references to bedding Ignore materials accept shelter</p>
7		9	oestrogen, progesterone, FSH, luteinizing any 2	1	two answers for 1 mark
8	(a)	10	1.86	1	
	(b)	10	46	1	ecf from a)
	(c)	11	30 (kg/m ²) put on more mass for less food consumed	1	
	(d)	12	<p>as the stocking density increases, body mass, mass gain and food consumed fall; (1) food conversion ratio rises gradually up to fifty; (1) mortality much lower at 30 then similar; (1)</p>	3	
	(e)	13	<p>1 mark for each valid point explained: eg body weight and weight gain fall because animals eating less/subject to greater stress; food consumed falls due to greater competition for food; food conversion falls due to animals lower weight gain; mortality increases due to spread of disease, bullying</p>	4	1 mark for each point an additional mark available for a valid explanation up to a maximum of 4 marks

Question		CBT	Answer	Mark	Guidance
9		14	sight/smell of the boar/pheromones will stimulate egg release in the sows	1	connection must be made for mark to be awarded
10		15	requirements for vehicle cleansing after use, prevents disease being spread on vehicles; movement licences; centrally recorded; cattle passports, ear-tags – enables traceability of diseased animals (max 2) standstills after on movements onto the farm, no move zones during disease outbreaks; prevent further transmission before disease becomes apparent; qualified drivers – aware of legislation to follow good practice; only move healthy animals; reporting of notifiable diseases to quarantine farms	4	1 mark for each valid point explained in the context of reducing disease transmission
Total				36	

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