

Environmental and Land-Based Science

General Certificate of Secondary B495/02

Livestock Husbandry

Mark Scheme for June 2010

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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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General advice to Assistant Examiners on the procedures to be used

YOU WILL BE REQUIRED TO UNDERTAKE 10 PRACTICE AND 10 STANDARDISATION SCRIPTS BEFORE STARTING TO MARK LIVE SCRIPTS.

- 1 The schedule of dates for the marking of this paper is very important. It is vital that you meet these requirements. If you experience problems then you must contact your Team Leader (Supervisor) without delay.
- 2 An element of professional judgement is required in the marking of any written paper. Candidates often do not use the exact words which appear in the detailed sheets which follow. If the science is correct and also answers the question then the mark(s) should normally be credited. If you are in doubt about the validity of any answer then consult your Team Leader (Supervisor) by phone, the messaging system within SCORIS or e-mail.
- 3 Correct answers to calculations always gain full credit even if no working is shown. (The 'Show your working' is to help candidates, who may then gain partial credit even if their final answer is not correct.)
- 4 Some questions may have a 'Level of Response' mark scheme. Any details about these will be in the rationale.
- 5 If an answer has been crossed out and no alternative answer has been written then mark the answer crossed out.
- 6 In addition to the award of 0 marks, there is a NR (No Response) option on SCORIS.

Award 0 marks

- if there is any attempt that earns no credit (including copying out the question or some crossed out working)

Award NR (No Response)

- if there is nothing written at all in the answer space
OR
- if there is any comment which does not in any way relate to the question being asked (e.g. 'can't do', 'don't know')
OR
- if there is any sort of mark which is not an attempt at the question (e.g. a dash, a question mark)

- 7 Abbreviations, annotations and conventions used in the detailed Mark Scheme.

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

8 Annotations: the following annotations are available on SCORIS.

✓	= correct response
×	= incorrect response
bod	= benefit of the doubt
nbod	= benefit of the doubt not given
ECF	= error carried forward
^	= information omitted
I	= ignore
R	= reject

Highlighting is also available to highlight any particular points on the script.

The following questions should be annotated with ticks to show where marks have been awarded in the body of the text:

9 The Comments box

The comments box will be used by your PE to explain their marking of the practice scripts for your information. Please refer to these comments when checking your practice scripts. You should only type in the comments box yourself when you have an additional object of the type described in Appendix B of the Handbook for Assistant Examiners and Subject Markers.

Please do not use the comments box for any other reason.

Any questions or comments you have for your Team Leader should be communicated by phone, SCORIS messaging system or e-mail.

10 Please send a brief report on the performance of the candidates to your Team Leader (Supervisor) by the end of the marking period. The Assistant Examiner's Report Form (AERF) can be found on the Cambridge Assessment Support Portal. This should contain notes on particular strengths displayed, as well as common errors or weaknesses. Constructive criticisms of the question paper/mark scheme are also appreciated.

Question		Expected Answer	Mark	Rationale/Additional Guidance
1		B	1	ACCEPT high nutrient feed
2		ventilated; dry; water	3	in this order
3		A	1	ACCEPT where the baby develops
4		any two from sick animals grow less well; are worth less at point of sale; cost of drugs; vets bills; disease may spread to other animals; animals may suffer, illegal not to treat sick animals	2	ACCEPT any reasonable answer.
5		B	1	ACCEPT embryo
6		C	1	ACCEPT 38
7		pig – 3m 3 w 3d sheep – 5 m hen – 21 days cow – 9 m	2	3-4 correct for 2 marks 2 correct 1 mark
8		insemination is placing of sperm into the female; fertilization is the fusing of sperm and ovum (egg)	2	ACCEPT reference to artificial insemination
9		safer; don't have to feed / care for the bull; prevents in-breeding; gives access to best bloodlines; can select for particular characteristics in the offspring	4	ALLOW choose which cows to inseminate or which bull to use; sexed offspring; sperm motility can be checked; more pregnancies per ejaculation. REJECT cheaper without qualification

Question		Expected Answer	Mark	Rationale/Additional Guidance
10		any two from requires specialist equipment; technically difficult; not usually necessary / cost effective; high failure rate; potential for disease	2	ACCEPT ethical arguments
11		density of animals leads to easier spread of disease OWTTE	1	NOT disease without qualification
12		antibiotics given to animals; remain in animal products; ingested by humans; antibiotics kill least resistant bacteria; most resistant survive; eventually bacterial strains resistant to the antibiotic develop	3	level of response marking
13		testosterone, oestrogen, progesterone; lutening, androgen, gonadotropin releasing hormone; follicle stimulating hormone eg oestrogen causes egg release.	2	
14	a	any one from wash hands; wear gloves	1	
15		tetanus	1	
16		Defra (1 mark) to ensure rapid traceability of the source in the event of a disease outbreak; containment of disease (1 from above for additional mark)	2	ACCEPT Trading Standards

Question		Expected Answer	Mark	Rationale/Additional Guidance
17		mutation bred with another animal; all the offspring with double muscle selected for breeding; repeated with many individuals over several generations until all have the double muscle	2	ACCEPT cloning; selective breeding
18	a	£42	1	
	b	£108	1	
	c	£2	1	
19	a	the amount produced goes down	1	
	b	it would go up	1	
	c	27p	1	ACCEPT 26- 28p
Total			36	

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