

Environmental and Land-Based Science

General Certificate of Secondary Education

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

Mark Scheme for January 2011

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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.

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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
<u> </u>	=	underlined words must be present in answer to score a mark
ecf	=	error carried forward
AW	=	alternative wording
ora	=	or reverse argument
OWTTE	=	or words to that effect

Question		Expected Answers	Marks	Additional Guidance
1	(a)	C – F2	1	
1	(b)	D – To improve conformation	1	
1	(c)	Hybrid Vigour.	1	R – reject hybrid or vigour on their own
1	(d)	Any two descriptive terms related to the animal in the picture.	2	
2		C – The first milk produced by a mammal after giving birth.	1	
3	(a)	concentrate	1	
3	(b)	B – a dry cow	1	
4		D – testosterone	1	
5	(a)	C – 3	1	
5	(b)	B – 25%	1	
6		B – fungi	1	
7		A – asthma	1	
8	(a)	Improving stock / increasing genetic variability in the herd. Intro of disease Dangers / cost of keeping a boar	2	Allow choose breed
8	(b)	Many more sows inseminated from a single ejaculation, less cost / danger / disease risks of moving the boar, allows boar to be used for many years after its death, any 2	2	

Question		Expected Answers	Marks	Additional Guidance
9		The sperm will quickly die at room temperature: allows it to be stored for long periods of time.	1	
10		Animals with horns are more dangerous; bullying other animals; horned animals need more space	1	
11		food; water; suitable environment (eg ventilation, light, space, warmth etc.) OWTTE	3	A – allow shelter / clean
12	(a)	fat, protein, casein content increase during lactation = 1 mark; lactose decreases = 1 mark.	2	
12	(b)	protein content	1	
13		Milk three times a day rather than twice; Feed the cattle well; mastitis gets worse throughout the lactation therefore cows need to be checked more frequently.	3	
14		Higher density of animals' means disease transmission is more likely; Stressful conditions increase disease susceptibility; Intensive environmental conditions promote growth of disease causing organisms; Financial considerations	3	Needs to be specific to intensive conditions
15		Cross this sheep with others until she gets off spring with the same characteristic; Select the sheep that shed their wool and breed with these; repeat over several generations until all the sheep born shed their wool.	3	A – allow using GM select sheep; remove selected genes; implant in eggs of recipient animals. If male animal 1 mark for reference to using AI to increase the chances of producing babies with the desired characteristic.
16	(a)	To ensure traceability to control the spread of disease.	1	
16	(b)	Qualified driver, regular rest feed/water stops for the animals.	1	
Total			36	

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