

**Qualification: 0171-033-010/510 Level 3 Agriculture – Theory exam (2)
(Livestock)**

June 2018

1	List three livestock management topics that should be considered within a livestock health plan. For each topic, give one example. (6 marks)		
	Acceptable answer(s)	Guidance	Max mks
	1 mark for each management topic, 1 mark for each example <ul style="list-style-type: none"> • Vaccination calendar/policy –e.g BVD, Leptospirosis, lungworm, clostridial diseases • Biosecurity measures – e.g footdips, wheel wash, restricted access • Routine stock tasks –e.g foot trimming, castration, disbudding • Routine health treatments – e.g worming, fly treatment 	Accept any other suitable answer	6
2	State the normal rectal temperature range of an adult sheep. (2 marks)		
	Acceptable answer(s)	Guidance	Max mks
	38.3-39.9 C / 100.9-103.8 F	Answer must be within 1 degree of low end of range and not exceed high end of range 1 mark for a correct temperature and 1 mark for range	2
3	Describe the potential impact of a zoonotic disease on the farming business. (4 marks)		
	Acceptable answer(s)	Guidance	Max mks

	<p>1 mark per description, up to 4 marks</p> <ul style="list-style-type: none"> • Potential health implications for staff and the wider public • Possibility of restriction on sales • Increase in cost e.g treatment of animals, disinfection of buildings and equipment • Reduction in output • Quarantine/isolation of affected animals 	Accept any other suitable answer	4
4	Describe four ways the digestive system of a chicken differs from that of a pig. (4 marks)		
	Acceptable answer(s)	Guidance	Max mks
	<p>1 mark per description, up to 4 marks</p> <ul style="list-style-type: none"> • The chicken has a beak instead of a mouth and lips, there are no teeth, a pig has a mouth, lips, teeth • The chicken has a crop to store and moisten food, a pig has no crop • the stomach is very small compared to a pig's • a muscular gizzard breaks down the food before it enters the intestines grit in the diet helps this process; pigs chew their food • The chicken has two caeca instead of one. • Faecal matter and urine are passed as one out of the body via the cloaca, whereas the pig comes out separately. 	Accept any other suitable answer	4
5	<p>a) Name three types of blood vessel. (3 marks)</p> <p>b) State the function of each of the blood vessels, given in 5a). (3 marks).</p>		
	Acceptable answer(s)	Guidance	Max mks
	<p>a) 1 mark for each blood vessel- up to 2 marks</p> <ul style="list-style-type: none"> • Capillaries • Veins • Arteries <p>b) 1 mark for function – up to 2 marks</p> <p>Capillaries - oxygen and nutrient transfer from the bloodstream to the other tissues in the body.</p>	Accept any other suitable answer	6

	<p>Veins - are responsible for returning deoxygenated blood to the heart</p> <p>Arteries - carry oxygenated blood away from the heart to all other tissues and organs.</p>		
6	<p>a) Name three digestive disorders in livestock. (3 marks)</p> <p>b) State one cause of each of the digestive disorders given in 6a). (3 marks)</p>		
	Acceptable answer(s)	Guidance	Max mks
	<p>a) 1 mark for each named digestive disorder, up to 3 marks</p> <p>b) 1 mark for correct cause, up to 3 marks</p> <p>Examples;</p> <ul style="list-style-type: none"> • Acidosis –feeding high levels of rapidly digestible carbohydrate • Ketosis – occurs in cattle when energy demand exceeds energy intake • Bloat – high grain low roughage diets • Diarrhoea/scours – infectious causes, excess feed, rapid changes to diet. 	Accept any other suitable answer	6
7	<p>State four factors that influence the quantity of waste on a farm. (4 marks)</p>		
	Acceptable answer(s)	Guidance	Max mks
	<p>1 mark for each factor, up to 4 marks</p> <ul style="list-style-type: none"> • Waste treatment • Compaction • Value as saleable material • Recycling • Amount of livestock • Efficiency of systems • Efficiency of the operator 	Accept any other suitable answer	4
8	<p>Explain how Nitrate Vulnerable Zone regulations guide the farmer with the storage and application of farmyard manure or slurry. (6 marks)</p>		
	Acceptable answer(s)	Guidance	Max mks

	<p>1 mark per correct point, up to 6 marks</p> <p>Nitrate Vulnerable Zone regulations state a minimum distance in which you cannot apply FYM/slurry from watercourses (1). There is a minimum distance in which FYM/Slurry cannot be stored so as to prevent pollution of the water (1).</p> <p>If slurry store is breached, if applied in the wrong weather conditions or amounts, this could lead to run off. (1)</p> <p>An organic farmer can spread up to 150kg of organic manure, but not anaerobic digestate in the closed period. (1) If applied in closed periods, the farmer could be subject to fines or withholding of single farm payment. (1)</p> <p>NVZ regulations state that a nutrient management plan must be produced recording annual amounts of FYM/slurry applied. (1)</p> <p>There is a maximum amount of nitrogen that could be applied, per crop, per year. (1)</p>	Accept any other suitable answer	6
9	<p>Explain the importance of completing the following pre start checks on an ATV or RTFL.</p> <p>i) Tyre pressure. (2 marks)</p> <p>ii) Fluid levels. (2 marks)</p>		
	Acceptable answer(s)	Guidance	Max mks
	<p>i) 1 mark for each correct point, up to 2 marks The tyre pressure must be correct to maximise grip (1) and the pressure must be equal in all tyres to minimise risk of overturning (1)</p> <p>ii) 1 mark for each correct point, up to 2 marks The fluid levels must be correct in order to avoid causing damage to machines (1) and for safe operation (1)</p>	Accept any other suitable answer	4
10	List six points to consider when completing a risk assessment for operating an ATV or RTFL. (6 marks)		
	Acceptable answer(s)	Guidance	Max mks

	<ul style="list-style-type: none"> • Machine condition • Site/terrain awareness • PPE • Pre start checks • Operator training • Road legality 	Accept any other suitable answer	6
11	<p>A livestock farm has biosecurity issues.</p> <p>Discuss suitable standard operating procedures to maintain biosecurity and minimise risk to animal health.</p>		
	Acceptable answer(s)	Guidance	Max mks
	<p>Band 1 (1 –4 marks) There is little discussion of standard operating procedures in regards to maintaining biosecurity and risks to animal health. Answer lacks logical structure. The use of technical language is limited and occasionally imprecise.</p> <p>Band 2 (5 – 8 marks) There is adequate discussion of standard operating procedures in regards to maintaining biosecurity and risks to animal health. There is some structure in the answer presented. The use of technical language is mostly accurate and consistent.</p> <p>Band 3 (9-12 marks) There is detailed and comprehensive discussion of standard operating procedures in regards to maintaining biosecurity and risks to animal health. Strong links made to animal health risks. The whole answer is coherent and well-structured.</p>	<p>Indicative content</p> <ul style="list-style-type: none"> • Restrict access to the farm e.g deliveries • Layout of the farm • Regular health checks • Isolation • Quarantine • Personal hygiene of staff • Correct siting of wash facilities • Vermin control • Avoid contamination of feed, avoiding creating waste • Disease can be carried on the wheels of machines– must be disinfected between sites • Correct waste storage facilities <p><i>For no awardable content, award 0 marks.</i></p>	12