

0172-36 Level 3 Advanced Technical Diploma in Equine Management (540)

0172-38 Level 3 Advanced Technical Extended Diploma in Equine Management (1080)

0172-004/504 Level 3 Equine Management – Theory exam (1)

March 2022 Mark Scheme

Q no.	Acceptable answer(s)	Guidance	Max mks	Ref
Q1	<p>1 mark each for any of the following, to a maximum of 4 marks:</p> <p>Shoes:</p> <ul style="list-style-type: none"> • Loose shoe • Lost shoe • Twisted shoe • Risen clenches • Nail bind • Nail Prick <p>Feet:</p> <ul style="list-style-type: none"> • Thrush • Abscess • Lameness • Laminitis • Overgrown feet • Hoof wall cracks (grass cracks/sand cracks) • Seedy toe/white line disease • Bruised sole • Puncture wound • Sidebones • Quittor • Navicular • Cracked heels • Over reach injuries • Poor hoof conformation • Incorrect hoof pastern angles • Corns • Contracted/collapsed heels • Quitter • Bone cysts • Keratoma • Pedal Osteitis • Pyramidal disease/Buttress foot/Fractured extensor process of pedal bone • Side bone 	<p>Do not accept terms:</p> <ul style="list-style-type: none"> • collapsed hoof – has to be heels • Needs a change of shoe – to generic • Bruised hoof/foot - needs to be sole • Greasy heel/scratches • Heat in the hoof • Loose nails – must be shoe/risen clenches • foot has bad smell/odour 	4	350.2.3 AO1

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	<ul style="list-style-type: none"> • Canker • Sheared heels • Navicular bone fracture • Pedal bone fracture <p>Accept any other correct answer.</p>			
Q2	<p>1 mark each for any of the following, to a maximum of 2 marks per question part:</p> <p>a) <i>Size/dimensions</i> – must be of an appropriate size for the horse to ensure enough room for movement. [1] To reduce chances of the horse getting cast/injured. [1] To reduce potential for the horse to become stiff/swelling. [1] to reduce development of stereotypic behaviours [1]</p> <p>b) <i>Ventilation</i> – Appropriate ventilation must be present to prevent respiratory/breathing/COPD/ROA problems occurring. [1] appropriate to prevent draughts and chills in cold weather [1] Appropriate to prevent sweating/overheating in hot weather [1], reduction of disease spread [1]</p> <p>c) <i>Internal Fixtures and fittings</i> – Must be appropriate in order to prevent the horse injuring itself. [1] appropriate size/height/positioning [1] no dangerous elements e.g. sharp edges [1] environmental enrichment can be added to enable health and welfare [1] appropriate to not restrict movement/reduce size of the stable [1]</p>	<p>Accept answers written negatively e.g. stable size must not be too small</p> <p>a) Where specific stable sizes are given, they must be appropriate for the horse (do not accept where stable size is too small) or mention that they are big enough for movement to be awarded the mark.</p> <p>Do not accept vague answers such as comfortable to walk round in.</p> <p>b) Do not accept:</p> <ul style="list-style-type: none"> • answers that state what is needed rather than why. • reduction in amount of dust/spores in the air • general answers such as ventilation needs to be good/sufficient without referring to airflow, air, fresh air. • Vague terms such as: dust on the lungs, can't breathe. <p>c) Accept answers where specific examples are given eg: Yorkshire boarding, tie rings, automatic waterer,</p> <p>Do not accept:</p> <ul style="list-style-type: none"> • general answers like stable must be safe and secure, must relate specifically to details around fixtures and fittings. • The structure of the stable such as doors and windows (unless an 	6	350. 3.1, 3.2 AO2

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		internal safety feature on these).		
Q3	<p>1 mark each for any of the following, to a maximum of 4 marks:</p> <ul style="list-style-type: none"> • Bandages [1] • Cotton wool [1] • Gamgee [1] • Sterile dressing materials [1] • Adhesive tape/tape [1] • (Rectal) thermometer [1] • Tweezers [1] • Gloves/latex gloves [1] • Scissors [1] • Hand sanitizer [1] • Eye wash/sterile wash [1] • Antiseptic solution [1] • Antiseptic cream/ointment [1] • Wound powder [1] • Poultice [1] • Contact details for the local veterinary practice [1] • Carrier bag [1] • Syringe [1] • Stethoscope [1] <p>Any other appropriate answer</p>	<p>Accept specific examples e.g. vet wrap, purple spray, hibiscrub.</p> <p>Do not accept:</p> <ul style="list-style-type: none"> • Disinfectant / disinfectant wipes • Clean Bucket 	4	351 4.1 AO1
Q4	<p>1 mark available for the correct identification of each transmission route. 1 mark available for the explanation of each transmission route. To a maximum of 6 marks</p> <ul style="list-style-type: none"> • Direct [1] – actual physical contact between two or more horses spreads the disease. [1] • Indirect [1] - contact with a pathogen via a vector/contaminated objects/vehicle/ through the air. [1] • Airborne [1] – when a disease is suspended in the air / and enters the horse’s body via the respiratory tract/is breathed in. [1] • Vectors [1] a living organism/fly/bite from a fly carries the disease to another horse.[1] • Fomites [1] – objects or material carry the disease / when a horse touches the fomite it becomes infected. [1] • Inhalation [1] disease is suspended in droplets in the air / which is breathed in via another horse. [1] • Ingestion [1] – disease contaminated food/eggs/soil/debris/water is eaten/drunk by a horse. [1] 	<p>Where a correct named method of transmission is given but the explanation is for a different method of transmission the mark is only awarded for the identified method.</p> <p>Where correct explanations are given but the method is not identified, a maximum of 3 marks can be awarded.</p>	6	351 2.1 AO2

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	<ul style="list-style-type: none"> Environment [1] – non-living object in the horse's environment carries the disease / Horse touches the object and contracts the disease. [1] 			
Q5	<p>1 mark each for any of the following, to a maximum of 4 marks:</p> <ul style="list-style-type: none"> It is a hormonal disorder/disorder of metabolism/disorder of carbohydrate metabolism [1] A suggested genetic predisposition / Genetic predisposition combined with environmental factors [1] Horses have increased energy efficiency/ tend to be 'good doers'/ 'easy keepers'/ 'thrifty gene' [1] The primary cause/disorder is insulin resistance/dysregulation/too much insulin in blood/produce too much insulin [1] Abnormal hormonal production due to obesity [1] Obesity/regional adiposity/adiposity may predispose to insulin resistance. [1] High calorie/nutrient dense/high sugar feeds/overfeeding can cause metabolic changes /insulin resistance[1] The role of insulin in the body is to regulate blood sugar [1] Insulin mediates the uptake of glucose from the bloodstream into the cells [1] EMS horses do not respond to insulin in a normal way [1] Glucose remains in the blood stream [1] Abnormalities in fat metabolism also contributes [1]. 	<p>Do not accept:</p> <ul style="list-style-type: none"> high sugar diets, lack of exercise, overfeeding – on their own Laminitis Insulin on its own Obesity on its own or obesity is the cause Lack of sensitivity to insulin Diabetes 	4	351 2.3 AO2
Q6	<p>1 mark each for any of the following, to a maximum of 6 marks:</p> <ul style="list-style-type: none"> Carbohydrates Protein Fats/lipids Vitamins Minerals Water 	<p>Do not accept</p> <ul style="list-style-type: none"> Fibre Examples of the nutrients e.g. starch 	6	355 1.2 AO1
Q7	<p>1 mark each for any of the following comparisons, to a maximum of 4 marks:</p> <ul style="list-style-type: none"> Haylage is less dusty than hay. [1] Low moisture content of hay allows mould spores to become airborne. [1] 	<p>Must be a comparison. Accept if comparison is clear but only mentions one.</p> <p>Maximum of 2 marks if talking about specific nutrient content eg energy, protein etc. (2nd to last bullet point)</p>	4	355 2.1 AO2

Q no.	Acceptable answer(s)	Guidance	Max mks	Ref
	<ul style="list-style-type: none"> • The higher moisture content of haylage prevent mould spores becoming airborne [1] • Haylage is more palatable/sweeter than hay [1] • Hay is drier than haylage • Haylage can be higher in nutritional value than hay / Horses can gain more nutrients from haylage than hay. [1] • Haylage is more digestible than hay. [1] • Both hay and haylage are high in fibre/structural carbohydrates [1] • The nutrient content of both hay and haylage varies dependant on grass type [1] • Haylage provides higher levels of digestible fibre [1], energy/sugars/starch/calories [1], protein [1], vitamins [1], minerals [1] than hay. • Because hay has lower moisture content than haylage more nutrients can be lost [1] 	<p>If practical examples are given, they must relate to content/properties</p> <p>Accept answers the opposite way round</p> <p>Do not accept:</p> <ul style="list-style-type: none"> • Hay rougher/takes longer to chew • Colour of hay / haylage differences • Haylage is richer • Preparation/harvesting • Wrapping/storage 		
Q8	<p>1 mark for each identification and 1 mark for each explanation, to a maximum of 4 marks:</p> <p>a) Body weight is needed in order to calculate the correct amount of feed/how much the horse needs to be fed [1] to calculate appetite [1], a horse of healthy weight would be fed between 2%-2.5% of body weight [1], underweight 2.5%-3% [1], overweight 1.5%-2% [1]</p> <p>b) To calculate energy requirements [1] nutrient requirements [1]</p>	<p>Answers must relate to calculating a ration.</p> <p>a) Accept where a percentage of body weight is given rather than a range.</p> <p>If specific nutrients are discussed, they must relate to a specific workload/life stage eg protein for young horse</p> <p>Do not accept generic answers such as:</p> <ul style="list-style-type: none"> • younger horses need more feed for growth 	4	355 3.1 AO2
Q9	<p>1 mark each for any of the following, to a maximum of 3 marks:</p> <ul style="list-style-type: none"> • Increased turnout. [1] • Increased exercise. [1] • Ad lib/increased forage/feed little and often. [1] • Increased opportunity for the horse to socialise/stabled where they can see each other/windows between stables. [1] • Feed horse an appropriate diet. [1] • Environmental enrichment e.g. jolly ball, mirrors [1] • Group housing. [1] 	<p>Examples of environmental enrichment/preventative techniques are limited to a maximum of 2 marks each.</p> <p>Accept brand name products.</p> <p>Do not accept hay net unless further information is given, eg suspended away from the wall</p>	3	356 3.3 AO1

Q no.	Acceptable answer(s)	Guidance	Max mks	Ref
	<ul style="list-style-type: none"> Preventative techniques e.g Cribbing collars [1] Cribox paste [1] Anti - weave bar/grid. [1] Routine [1] Stabling/routine to suit individual horse. E.g some horse like a quieter area of the yard. [1] <p>Any other suitable answer</p>			
Q10	<p>1 mark each for any of the following, to a maximum of 2 marks per question part:</p> <p>a) Lead stallion</p> <ul style="list-style-type: none"> The stallion pushes the herd from behind [1] The stallion resolves conflicts between horses in the herd [1] The stallion defends and protects the herd from danger [1] The stallion will drive young colts and fillies out of the herd. [1] Stallion defends the herd from other stallions [1] Stallion breeds with the mares [1] <p>b) Lead mare</p> <ul style="list-style-type: none"> They lead the rest of the herd to food and water [1] The lead mare leads from the front of the herd [1] Lead mare determines the route to take when fleeing from danger [1] The lead mare is at the top of the hierarchy/controls the hierarchy of the herd [1] reproductive priorities are given to the lead mare [1] 	<p>Answers must relate to the natural herd environment</p> <p>b) Do not accept:</p> <ul style="list-style-type: none"> lead mare has priority for water/food To protect foals 	4	356 2.1 AO2
Q11	<p>1 mark each for any of the following, to a maximum of 3 marks:</p> <ul style="list-style-type: none"> Horses spend more time in the stable/reduced turn out during winter [1] This leads to a build up of excess energy [1] diets not adjusted to take into account increased stabling [1] When ridden horses can release the excess energy with undesirable behaviours [1]. Horses can be cold/cold backed when first ridden which can lead to undesirable behaviours [1] adverse weather conditions such as high wind/spooky environment/trees/rubbish blowing can lead to undesirable behaviours (must be linked to the weather) [1] horses are often clipped in winter [1] this can increase sensitivity to inclement weather [1] 		3	356 3.1 AO2

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Q12	<p>Band 1: 1 – 4 marks A basic answer which is largely descriptive or recall giving minimal or no justification to how the management impacts on health and welfare. Different aspects of the field/horse management are described with minimal detail and with little to no consideration to how these link to health and welfare. To access the higher marks in the band the response will include a basic discussion with a wider range of management strategies and will attempt to show the importance of these for field kept horses.</p> <p>Band 2: 5 – 8 marks A clear discussion about how the management impacts on health and welfare. Different aspects of the field/horse management are described with some detail and linked to the impacts of health and welfare. To access higher marks in the band, the response will show some justification of the importance of management strategies for field kept horses. It will link a wider range of topics.</p> <p>Band 3: 9 – 12 marks Detailed discussion on how the management impacts on health and welfare. Different aspects of the field/horse management are described comprehensively with detail of how they can influence on health and welfare. To access the higher marks in the band, the response will be up to date and fully justify the importance of management strategies for field kept horses taking into consideration both positive and negative impacts and will take a holistic approach to discuss the topics.</p> <p>For no awardable content, award 0 marks.</p>	<p>Indicative content:</p> <p>Field environment/management:</p> <ul style="list-style-type: none"> • Size/acreage for number of horses. • Soil/drainage/ground conditions • Water availability • Fencing/boundaries/surrounding areas/litter • Poisonous plants/weeds/ • Shelter/shade/time of year. • Amount of/quality of grass. • Field management: eg Poo picking, harrowing, rolling <p>Management of horses:</p> <ul style="list-style-type: none"> • Preventative care schedules, assessing feet. • Feeding horses in a group. • Effect of field specifications on psychological and physical stability of horses. • Health checking • Disease transmission in a group of horses. • Nutrient needs/feeding horses at grass. • Links to nutritional diseases/ disorders • Parasite control • Managing herd dynamics – fighting etc. • Link to digestive physiology/evolution [trickle feeding] • Evolution of the horse, natural behaviours, natural lifestyle. • Link natural life style, reduction in undesirable behaviours. 	12	AO4

Q no.	Acceptable answer(s)	Guidance	Max mks	Ref
		<ul style="list-style-type: none"> • The five animal needs • Safety considerations working with groups of horses. • Introducing/removing horses from the group • Difficulties with observing individuals • The effects of working horses on grass 		