



2007 VCE VET Equine Industry GA 2: Written examination

GENERAL COMMENTS

Students generally performed very well on this year's examination. However, there was still a lack of depth of knowledge of the physiological systems of the horse. Student responses were generally brief and to the point with the space provided and the marks allocated used as a guide to the length of the answer. Many students still ignored the advice given in previous assessment reports, which stated that 'If a question is worth two marks students should provide two pieces of information'.

In Section B the following general approaches were followed in allocating marks.

- If a question asked for a number of examples, reasons, etc. to be given and a student gave more examples than asked for and no answers had been crossed out, the assessor considered only the required number of answers in the order they were written. For example, if three responses were required and five responses were given, then only the first three responses were assessed.
- If contradictory answers were given, full marks could not be awarded.
- If a response did not address the question, it was given no marks.
- To gain marks, responses must be consistent with the level of knowledge to be expected of a trainee in the equine industry at Certificate II level.

SPECIFIC INFORMATION

Section A – Multiple-choice questions

The table below indicates the percentage of students who chose each option. The correct answer is indicated by shading.

Question	% A	% B	% C	% D	Comments
1	3	91	4	2	
2	95	0	3	1	
3	62	30	5	3	The minimum time recommended is two hours.
4	17	11	70	2	
5	7	4	88	1	
6	100	0	0	0	
7	63	20	4	13	Specific knowledge of anatomy was required.
8	98	0	1	1	
9	5	0	94	1	
10	15	26	5	55	It is difficult to find specific detail about the relationship between iodine and age. However, students should have been able to eliminate the other three alternatives.
11	26	4	6	64	Students need to be aware of details with respect to the relative qualities of feeds.
12	3	15	79	3	
13	4	3	73	19	
14	74	19	4	3	
15	3	11	84	1	
16	24	7	48	20	This question required specific knowledge about diamond mesh fencing, indicating a need for students to keep abreast of new developments in the equine industry
17	98	1	1	0	
18	100	0	0	0	
19	0	0	97	3	
20	5	42	12	42	Specific knowledge of anatomy was required.

Most multiple-choice questions were answered well.

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Section B – Short answer questions

Question 1

Marks	0	1	2	3	Average
%	0	3	24	73	2.7

Any three of:

- water
- animals
- bacteria
- faeces
- insects
- stale feed
- urine
- chemicals
- dust
- medication
- mould or fungus (**not** both)
- pesticides
- insecticides.

Question 2a.

Marks	0	1	Average
%	58	42	0.4

A device, band, strap or stocking tied to the horse's tongue (for restricting the tongue's movement).

Question 2b.

Marks	0	1	Average
%	61	39	0.4

A tongue tie is used (any one of):

- when working a horse to keep the tongue from coming over the bit
- at the races
- to keep the airway clear.

Question 3

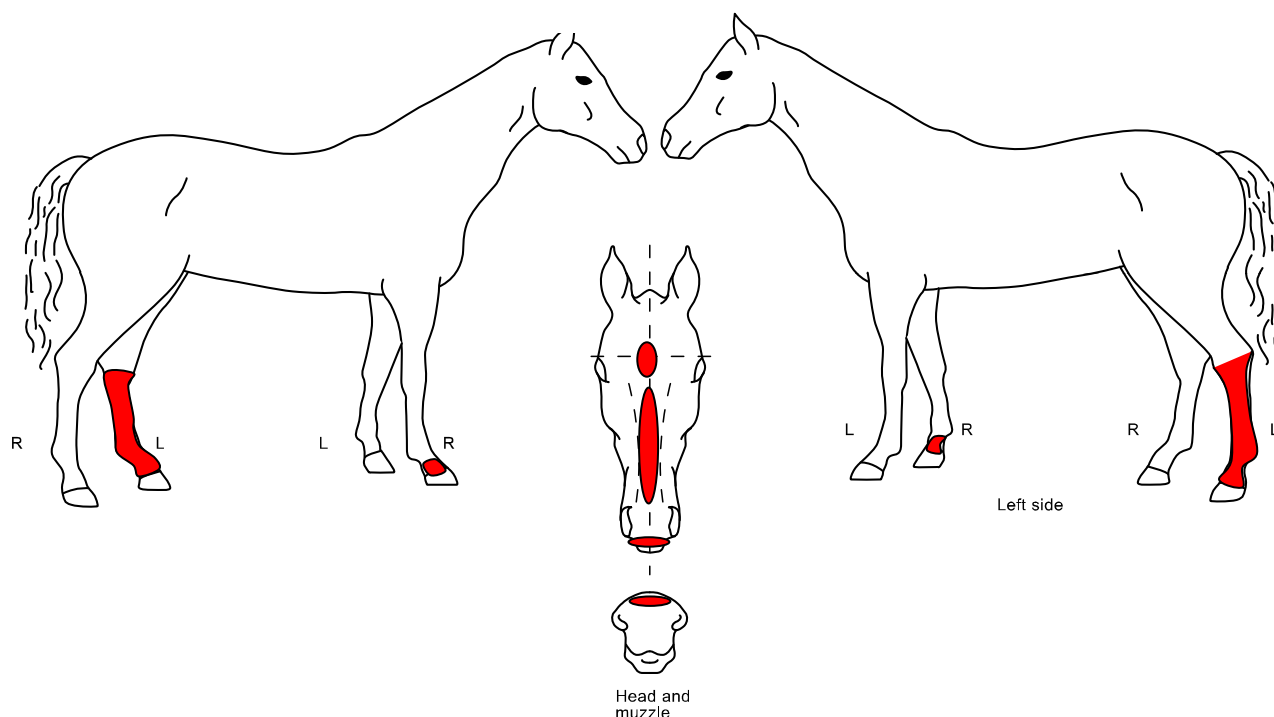
Marks	0	1	2	3	Average
%	2	3	50	45	2.4

Hazard	Mechanical	Environmental	Operator
Feed storage bin left open			✓
A boiler in the feed room has a frayed cord	✓		
A farm bike being ridden without a helmet			✓

If more than one box was ticked in one row of the table, no marks were awarded for that row.

Question 4

Marks	0	1	2	3	4	5	Average
%	0	1	9	22	34	33	3.9



- The star needed to be some type of marking (a diamond) around about the cross on the horse's head.
- The stripe could run from the star, probably go down between the two dotted lines on the face and finish around about the nostrils.
- The snip needed to be shown on the face and also on the muzzle. It should not have been connected to the stripe.
- The stocking needed to be shown on the left hind and come up to the hock.
- The pastern had to be shown from the hoof to **below** the fetlock in white.

One mark was awarded for each feature. One mark was deducted if only one horse was marked and if the muzzle was not marked.

Question 5

Marks	0	1	2	3	Average
%	14	37	42	8	1.5

Any three of:

- growth point for the hoof
- primary source of nutrition
- hoof wall will be defective if this structure is injured
- protects hoof
- sensory device
- damage to the coronary band will result in damage to the hoof wall.

Question 6

Marks	0	1	2	3	Average
%	13	34	42	11	1.5

Any three of:

- shock absorber, distributing concussion to the internal digital cushion
- non-slip mechanism (balance)
- aid to blood circulation and heel expansion
- stores moisture
- enables hoof to spread.

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Question 7

Marks	0	1	2	3	4	Average
%	21	18	25	16	21	2.0

Forelegs

- The humerus and pastern slopes are appropriate in order to help the forelegs absorb concussion.
- If too sloped in the front legs then the horse will put more stress on front leg tendons.
- Upright on pastern causes an uncomfortable or jarring ride. It is prone to navicular and ringbone.
- The forelegs must be straight from the elbow to the fetlock. Crooked legs cause weight to be distributed unevenly resulting in excess pressure on bones and joints as well as excessive pulling on muscles, tendons and ligaments.
- Legs are straight from behind and in front.
- From the front view, if the forearm bone is inside the cannon bone then paddle and stress on knee bones occur.
- If sickle hock, then weakness in the hindquarters occurs.
- If cow hocked, the horse will have unusual movement and tire quickly in distance events.
- If camped under, then a horse will not be able to cover the same distances as horses that stand more squarely.

Hind legs

- Angles of stifle and hock joints should be neither too straight nor too angled. The horse should not be straight legged, camped under or camped out.
- Viewed from the rear, the legs should be straight.

One mark was awarded for each example. The examples provided had to be both 'related to the leg' and 'relevant to endurance horses'. One mark was also awarded for each explanation. It was necessary for the relevant explanation to precisely match the example and relate to endurance horses.

It was insufficient to use **straight legs** as an example of excellent conformation unless the rest of the answer made it clear where the legs were viewed from, which part of the leg was being considered and whether it was a foreleg or a hind leg.

Question 8

Marks	0	1	2	3	4	5	6	7	Average
%	3	7	17	22	24	15	7	5	3.6

Hernia	abdomen, belly, stomach, groin, umbilical area
Splint	lower legs, cannon bone, splint bone
Sore shins	lower legs, cannon bone (not 'shins')
Bone spavin	hock joint
Wind gall	fetlock joint
Bog spavin	hock
Roaring	larynx, upper respiratory tract, trachea, wind pipe, airways, throat

Question 9

Marks	0	1	2	3	Average
%	0	0	1	99	3.0

Any three of:

- dust mask
- long sleeved shirt
- gloves
- hat
- goggles
- protective footwear
- overalls.

Question 10

Marks	0	1	Average
%	3	97	1.0

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Any one of:

- inform the stable manager
- ensure isolation
- keep the horse comfortable
- call a vet.

Question 11a.

Marks	0	1	Average
%	69	31	0.3

Four to six hours

Question 11b.

Marks	0	1	2	3	Average
%	0	1	8	91	2.9

Any three of:

- travel bandages and protectors not too tight and still in position
- no injury to the horse
- any rubbing of hair
- dehydration (skin pinch)
- need for rugs
- general health check (bright eye, nasal discharge, temperature)
- secured
- thirsty or hungry
- behaviour of horse
- mechanical check on safety of vehicle
- vital signs.

Question 12

Marks	0	1	2	3	Average
%	39	29	24	8	1.0

This concept is most frequently associated with the nutritional value of pasture and grains.

- 'As fed' means the weight of the feed or ingredients including moisture (water) content. For pasture this means 'as eaten' as well. Growing green pasture has 28–35 per cent dry matter. Grains and cured hay have 95 per cent and 90 per cent dry matter, respectively.
- 'Dry matter' refers to the portion of the feed remaining after removal of the moisture. This is how the nutritional value of pasture is determined. Hay is 'dry matter' (dried at 84°C for 24 hours in a forced draught oven). Calculations made on a 'dry matter', need to be converted to an 'as fed' basis when determining how much to feed.

One mark was awarded if water content was mentioned. Another mark was given if weight difference was mentioned and the last mark for mentioning the relevant processing. For full marks the answer had to be technically correct.

Question 13

Marks	0	1	2	Average
%	20	35	45	1.3

- for maintenance the horse required 68 MJ
- one hour of slow trotting required 10.5 MJ
- two hours of fast trotting needed 26.2 MJ × 2
- the total is 130.9 MJ (students were not required to total their responses)

Two marks were given for 68 + 10.5 + 2 × 26.2 MJ required per day. One mark was awarded if students listed three components or had 10.5 + 2 × 26.2.

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Question 14a.

Marks	0	1	2	3	Average
%	2	5	14	79	2.7

Any three of:

- loss of weight
- tail rubbing
- dull coat
- anaemia (mucosa colour)
- skinny with pot belly
- colic symptoms (maximum of one mark)
- diarrhoea
- eggs in faecal egg count
- poor performance
- lack of appetite
- lethargy.

Question 14b.

Marks	0	1	2	3	Average
%	6	15	33	46	2.2

Various pathways were possible. Each had to show three stages. For example:

- diarrhoea → continued weight loss → death
- impaction → colic → death
- intestinal damage → internal bleeding → shock or death.

Symptoms could have been selected from various pathways and the order was not critical. Vital signs were accepted. Students needed to use part a. of the question in answering this part. Students are encouraged to read the entire question before answering part a. and to take note of what is required in part b. Students tended to give rambling responses in this part.

Question 15a.

Marks	0	1	2	Average
%	64	29	6	0.4

Any two of:

- sodium bicarbonate
- citrates
- naturally occurring (fresh grass, some feeds)
- 'milkshakes'.

Brand names such as Carbolene were also accepted.

Question 15b.

Marks	0	1	2	Average
%	59	21	20	0.6

Any two of:

- lower the effects of lactic acid build up
- increase plasma total CO₂
- raise blood pH
- assist the horse in recovering from strenuous exercise
- improved performance
- disqualification.

Question 16a.

Marks	0	1	2	Average
%	6	24	70	1.7

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Any two of:

- mucosa colour
- shallow respiration
- low blood pressure
- hydration
- high pulse rate
- physical stability
- capillary refill
- listlessness
- low temperature.

Question 16b.

Marks	0	1	2	Average
%	3	22	75	1.7

Any two of:

- keep horse warm
- seek assistance
- keep horse calm/quiet
- call vet
- restrict movement (stable)
- stop bleeding
- replace fluids and electrolytes
- monitor vital signs.

Question 17

Marks	0	1	2	Average
%	1	8	91	1.9

Any two of:

- sprained tendon
- over reach
- bruising
- thoroughpin
- ringbone
- fracture
- bowed tendon
- speedy cut
- laceration
- strain
- torn tendon
- sprain
- wind gall
- bursitis
- capped hock
- mud fever
- spavin
- splints
- puncture.

Students needed to take care not to include the hoof as the question clearly stated 'leg'.

Question 18

Marks	0	1	2	3	4	Average
%	19	22	23	18	18	2.0

- coffin joint
- pastern joint

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- fetlock
- hock joint (tarsal joint)
- stifle joint
- hip joint

Students lost one mark if the order was incorrect.

Question 19a.

Marks	0	1	2	Average
%	10	82	8	1.0

Even though the question asked for 'types' of grass weeds, varieties were allowed.

Types

- annual (vulpia, brome grass, quaking grass, hair grass)
- perennial (browntop, Yorkshire fog grass)

Varieties

- wild oats
- barley grass
- soft brome grass
- sweet vernal
- wild sorghum grass
- meadow foxtail
- onion grass
- bent grass
- paspalum
- couch

Answers needed to refer to **grass** weeds to gain two marks. If other weeds (such as cape weed and blackberry) were listed, one mark was given. One mark was given if any grasses were listed.

Question 19b.

Marks	0	1	2	Average
%	7	30	63	1.6

Any two of:

- poor nutritional quality
- not pasture
- unpalatable
- difficult to eradicate
- difficult to digest
- toxic
- compete with pasture.

It was not acceptable for students to give 'not naturally grown' as a reason.

Question 20

Marks	0	1	2	3	Average
%	0	2	20	77	2.8

Any three of:

- stress
- fright
- exercise
- sexual arousal
- excitement
- pain
- illness or infection (for example, shock, colic, laminitis).

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Question 21

Marks	0	1	2	3	Average
%	28	13	21	38	1.7

Any three of:

- smooth
- slow twitch
- fast twitch
- cardiac
- skeletal
- flexor
- voluntary
- involuntary
- extensor
- any muscles named.

Question 22a.

Marks	0	1	2	3	Average
%	4	13	26	57	2.4

Any three of:

- at the races
- when leading a stallion or a racehorse anywhere
- on a head-strong horse
- to restrain for medical reasons
- when unfamiliar with a horse
- for loading
- at yearling sales.

Question 22b.

Marks	0	1	2	3	Average
%	1	3	16	80	2.8

Any three of:

- while travelling
- when a recreational horse is behaving well
- when eating
- when being ridden
- when left in a yard, paddock or stable
- when not needed
- when tied up
- if not correctly fitted
- when saddling a horse.

Question 23a.

Marks	0	1	2	Average
%	15	33	52	1.4

A code of practice is a set of guidelines that have formal recognition (industry/government) relating to the practices and procedures that must be followed in order to implement laws and regulations.

One mark was awarded for reference to 'guidelines' and one mark for implying a consequence for not complying.

Question 23b.

Marks	0	1	Average
%	15	85	0.9

The purpose of this code of practice is to protect animals used for scientific purposes.

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Question 24

Marks	0	1	2	3	4	5	6	Average
%	2	9	15	20	22	16	17	3.7

A horse being pregnancy tested

- A crush is virtually essential as this is not an emergency situation and veterinary OH&S would require it. It protects the horse handler and the vet, especially from being kicked. It enables the examination to be performed safely and quickly.

A horse attended by a farrier

- halter and lead rope
- rope halter
- neck grip
- twitch on the nose

Acceptable reasons included:

- causes the release of endorphins which leads to relaxation
- mention of a yard or confinement (although some professionals will not work in such a confined space).

Two reasons for each recommendation were required. Students should avoid repeating reasons as full marks cannot be awarded for duplicate answers. The word 'crush' was required if students were to gain full marks. Students should be aware that a drug would not be advisable as the mare may be pregnant. 'Where to stand' was not an acceptable answer on its own.