VICTORIAN CURRICULUM AND ASSESSMENT AUTHORITY

2006 Equine Industry GA 2: Written examination

GENERAL COMMENTS

Students generally performed very well on this year's examination. However, there was a lack of depth of knowledge of the physiological systems of the horse.

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

- If a question asked for a number of examples or reasons to be given and a student gave more than was required and no answers had been crossed out, only the required number of answers were considered. 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 were not awarded.
- Responses that did not address the subject of a question were given zero marks.

Students, teachers and trainers should also take note of the following information.

- To gain marks, responses need to be consistent with the level of knowledge expected of a trainee in the horse industry at Certificate II standard.
- Student responses should be brief and to the point. The space provided and the marks allocated should be used as a guide to the length of the answer.

SPECIFIC INFORMATION

Section A – Multiple-choice questions

Question	% A	% B	% C	% D	Comments
1	10	7	81	2	
2	3	8	60	29	
3	88	8	1	3	
4	1	3	96	0	
5	0	5	2	92	
6	4	60	27	10	
7	1	2	18	79	
8	4	76	15	5	
9	25	38	33	4	A pregnant mare needs about a 20% increase throughout pregnancy. Her maximum energy needs increase by a further 45%, to the maximum requirement, when the foal is three months old (alternative B). This represents an increase of about 70% since becoming pregnant (alternative A). Both A and B were accepted due to the ambiguity of the question.
10	80	8	9	3	
11	1	0	0	98	
12	5	94	0	0	
13	1	1	73	24	
14	30	33	33	3	This question was one of a number where the low percentage of correct answers indicated a lack of detailed knowledge of anatomy. Tendons and ligaments have similar structures but tendons join muscle to bone and have a protective sheath. Ligaments join bone to bone and are a far less flexible linkage.
15	9	3	80	7	
16	3	0	18	79	
17	93	5	2	0	
18	13	2	18	67	
19	2	90	8	0	
20	10	56	5	29	

Section B – Short answer questions

This report contains examples of answers that were expected. It is not intended to contain all responses which were awarded full marks

Question 1

Marks	0	1	2	3	4	Average
%	0	1	13	42	44	**3.3**

Any four of:

- convenience (easy access for delivery and feeding out)
- safety of the storage area (fire, OH&S)
- airflow
- protection from vermin (rats and mice)
- shelf life of the feed (processing methods used and the life of the feedstuff)
- moisture uptake, mould or dampness (these responses counted as one only)
- water proofing
- exposure to sunlight
- rotation of stock/feed
- age of feed
- amount of dust
- cleanliness of the storage area.

Students needed to be sure they gave four different factors.

Question 2

Marks	0	1	2	3	4	Average
%	2	10	31	43	15	**2.6**

Benefits included any two of:

- decreases dust
- integrates supplements
- increases palatability.

Disadvantages included any two of:

- discourages salivation
- can go rancid if left too long
- increases weight of feed
- leaching additives
- decreases palatability
- time consuming.

Some students incorrectly interpreted ‘dampening’ as meaning ‘soaking’. This resulted in incorrect responses to do with the digestibility of feed.

Question 3

Marks	0	1	2	3	Average
%	16	16	29	39	**1.9**

Horse	Factors influencing requirements
four-month-old thoroughbred foal	weaned or not, growth rate, condition, competition with others, quality of pasture
four-year-old thoroughbred racehorse in the middle of a six-week race preparation	workload, stage of training, metabolism, weight, condition
thoroughbred wet mare	reproductive status, condition, metabolism, stage of lactation, quality of pasture

This question was quite poorly interpreted. Many students displayed some knowledge of nutrition but did not answer the question, which asked for factors **influencing** requirements. Many did not know what a 'wet mare' was.

Question 4

Marks	0	1	2	3	4	5	6	7	8	Average
%	2	0	1	4	13	21	25	24	11	**5.8**

Horse No.	Condition type	Neck	Ribs	Rump
1	3 – Good	• no crest • firm neck	• just covered • easily felt	• round • covered over back bone • no gutter along spine
2	1 – Poor	• ewe neck • narrow and slack along the base	• ribs easily visible • skin sunken either side of the backbone • spinous processes well defined	• sunken rump • prominent rump bones • cavity under tail
3	2 – Moderate	• narrow • firm	• ribs just visible • backbone well covered • spinous processes felt	• rump flat on either side of the backbone • croup well defined
4	5 – Very fat	• marked crest • very wide and firm • folds of fat	• ribs buried, not easily felt • gutter along back	• bulging rump • central gutter along back • broad, flat back • lumps of fat

One mark was awarded for one correct description per cell, without contradiction. Students were expected to display knowledge of the defining properties of each condition type. The condition type may have been expressed as a score or a description (as seen above).

Question 5

Marks	0	1	2	3	4	Average
%	7	10	14	35	34	**2.8**

Area	Description
Neck	ewe, swan, thick throatlatch, short, pony, bull, long, thick, thin, broken crest, 'broken' neck
Shoulder	straight, upright, open angle, short, excessively sloping, excessively long
Back	long, long loin, short, no wither, sway, roach, straight, long coupled, narrow ribbed
Leg	base narrow, toe in, pigeon toed, toe out, paddling, knock knees, knee narrow, bench knees, offset knees, calf knees, back at the knee, buck knee, knee sprung, over at the knee, tied in below the knee, under in front, camped out in front, sickle hocks, straight hind, straight (upright) pastern, short pastern, long pastern, oblique (sloping) pastern, under behind, camped out behind, knocked down hip, cow hock, splay footed, base wide, straight behind

One mark was awarded for each description, providing it was adequate; for example, crooked legs was not acceptable. Students needed to refer correctly to the anatomical definition; for example, back.

Some errors resulted from reading 'conformation' as 'condition'.

Question 6

Marks	0	1	2	3	4	Average
%	1	5	15	41	37	**3.1**

Any four of:

- dietary (dry feeds)
- reproductive status
- lactation
- exercise

- environmental temperatures
- water content of pasture and pasture availability
- condition of the horse
- any illness (overall health)
- size
- water quality (such as purity, cleanliness and taste)
- additives in diet/feed; for example, salt.

Answers relating to water availability or competition for water were not accepted. Age was also not accepted.

Question 7

Marks	0	1	2	3	Average
%	0	1	12	87	**2.9**

To ensure a saddle is stored correctly, you should:

- check for wear and tear
- repair damage
- remove fittings
- clean and oil
- place in vermin proof saddle bag and store in a clean, dry place protected from damage.

One mark was awarded for each of three steps, providing there was no contradiction. This was the best answered question in Section B.

Question 8

Marks	0	1	2	3	Average
%	3	4	30	63	**2.6**

Three regions to inspect include:

- hoof
- leg (pastern, fetlock joint, knee)
- shoulder
- withers
- back.

Question 9

Marks	0	1	2	Average
%	7	80	14	**1.1**

A worming regime should include changing the worming product every 12 months because:

- this helps prevent drug resistance in internal parasites
- different products deal with different worms
- it's more economical if you can alternate expensive and inexpensive wormers.

Students needed to give two reasons to get two marks.

Question 10

Marks	0	1	2	3	Average
%	6	21	42	31	**2.0**

Any three of:

- brands
- whorls
- microchips
- height
- prophet's thumbs
- scars
- shape and size of chestnuts
- breed.

Clearly different answers were required, therefore 'breeding, sire and dame' would only be awarded one mark. Features must be relatively stable. 'Markings' without further information was also not accepted.

Question 11

Marks	0	1	Average
%	48	52	**0.5**

Biotin (vitamin H) or calcium

Proprietary or brand names (for example, Founderguard) were not accepted; Certificate II students are expected to be able to name the active components of the additives.

Question 12

Marks	0	1	2	3	4	Average
%	6	18	33	28	14	**2.3**

Any four of:

- visual factors (colour, smell, grass content, leaf content)
- texture
- weight
- protein content
- calcium content
- energy content
- digestibility
- cost.

Students often did not make it clear which hay they were referring to, using statements such as 'contains more protein' without stating which hay type they were referring to.

Question 13

Marks	0	1	2	3	4	5	6	Average
%	3	1	7	23	5	17	43	**4.5**

The table below gives some examples of appropriate conditions and the signs/symptoms of each.

condition	signs/symptoms
diarrhoea	loose faeces, noisy gut sounds, weight loss
laminitis	lameness, reluctance to move, leaning back on the heels, bounding pulse behind heels, hot feet, firm crest
colic	rolling, looking at stomach
staggers	unsteady on feet, head held low
worms	dull coat, losing condition, scratching, worms in manure

Sound knowledge of horse injuries was displayed by students but some of the examples given, such as azoturia or strighalt, did not relate to a horse grazing on spring growth.

Question 14

Marks	0	1	2	3	4	Average
%	6	14	30	22	27	**2.5**

Arteries:

- in the main, transport oxygenated blood around the body (arteries take blood away from the heart, so the pulmonary artery carries deoxygenated blood)
- transport blood
- transport hormones
- control temperature.

Veins:

- in the main, transport deoxygenated blood around the body (veins take blood **to** the heart, so the pulmonary vein carries oxygenated blood)
- carry hormones
- control temperature.

Generic interpretation (answers were not specific to either arteries or veins):

- transport blood (hormones, oxygen, carbon dioxide, water, urea, blood cells, nutrients, waste products)
- control temperature.

Poor or confused knowledge of the difference between arteries and veins was displayed.

Question 15

Marks	0	1	2	3	Average
%	0	0	10	90	**2.9**

	Check
Hoof	no chips or cracks, overgrown
Nails	clenches lifted, clenches broken off, any missing nails
Shoes	thin, broken, loose, twisted

One check for each area was required.

Question 16

Marks	0	1	2	3	4	Average
%	37	28	22	9	4	**1.2**

	Major function(s)
Stomach	mix food with gastric secretions, enzymes and acids
Small intestine	extract nutrients
Caesium (large intestine)	ferment fibre
Small colon	water uptake

One mark was awarded for each correct answer. Once again, students showed poor detailed knowledge of anatomy.

Question 17

Marks	0	1	2	3	Average
%	1	3	16	81	**2.8**

17a.

Any two of:

- blackberry
- dock
- capeweed
- buttercup
- marshmallow
- Patterson's curse
- ragwort.

17b.

Possible answers included:

- broad leaf weeds reduce light to plants underneath, take up available moisture and can reduce the productivity of the pasture by up to 50 per cent

- all weeds compete with pasture for nutrients
- some weeds, for example blackberries, restrict access to parts of the paddock
- some weeds are toxic or promote the growth of toxins.

Question 18

Marks	0	1	2	3	4	Average
%	2	5	14	18	62	**3.3**

18a.

Being cast means that:

- the horse is unable to right itself
- the horse is caught on its back.

18b.

You would deal with the situation by getting assistance from another trained person.

18c.

The situation would be corrected by:

- using a rope, which would be placed around the leg(s) of the horse, and pull the horse into a position where it can get up on its own
- moving the horse to where it can get up.

Only one mark was awarded for 'make anti-casting wall'.

This question was well done. It was pleasing to see almost all students recognised the need to seek assistance.

Question 19

Marks	0	1	Average
%	18	82	**0.8**

Oats are considered safer than barley or wheat because:

- wheat swells in the stomach when water is added, and barley does this to some degree too
- both barley and wheat are higher in energy than oats, making the horse harder to control
- oats are easier to digest
- barley and wheat can be fed to horses but are often soaked first or pre-prepared by crushing, rolling or cracking
- there is a low risk of hindgut acidosis.

Question 20

Marks	0	1	2	Average
%	37	17	47	**1.1**

Grain should be measured by weight:

- because the density of grain may vary
- to be sure of maintaining energy quantity
- to maintain the desired proportion of concentrates
- because different scoops may be different sizes.

Question 21

Marks	0	1	2	Average
%	7	44	48	**1.4**

Any two of:

- over bite or under bite
- retained dental caps or incisors
- sharp edges on teeth
- mobile wolf teeth
- quidding
- wave mouth.

Question 22

Marks	0	1	2	Average
%	34	44	22	**0.9**

Any two of:

- large or small strongyles (bloodworms, redworms)
- roundworm
- pinworm
- tapeworm
- threadworm
- lungworm.

Bots, worms and ringworm were not acceptable answers. Bots should be treated annually, and specific worm types needed to be identified. Ringworm is **not** a worm.

Question 23

Marks	0	1	Average
%	62	38	**0.4**

Capped hock

Question 24

Marks	0	1	2	3	Average
%	1	16	45	38	**2.2**

24a.

Quarantine should last between 7 and 35 days.

24b.

Any two of:

- equine influenza
- strangles
- lice
- ringworm
- cold.

Many other equine respiratory disorders were also accepted, so long as they were specified.

Question 25

Marks	0	1	2	Average
%	6	45	49	**1.5**

Any two of:

- it rubs
- it galls the horse
- the horse has a sore back
- it is loose
- it is too tight
- it is unstable
- conduct a chalk test
- the horse has soreness when worked.

Question 26

Marks	0	1	2	3	4	5	6	7	8	Average
%	3	2	3	6	12	17	29	21	7	**5.4**

Test	Normal Range
Capillary refill	1–2 seconds
Temperature	36.5–38.5 (a one degree range at least should have been given)
Respirations	8–20 breaths per minute (the range given needed to include 12)
Heart pulse	25–45 beats per minute (a range of at least 10 was needed)
Mucosa colour	pink
Skin pinch test	return within one second
Urine observation	yellow

Most students identified appropriate tests but there was a lack of precision with 'normal ranges'. This question specifically related to the **circulatory** system, therefore tests that related to other areas were not acceptable.

Question 27

Marks	0	1	2	3	4	5	6	Average
%	1	0	4	10	34	23	28	**4.6**

Process Steps	Potential Hazard	Risks
Approach Horse	• quality of fencing • quality of terrain • obstacles in paddock • horse • other horses • handler • assistant • quality of equipment	• crowding by other horses • biting by horses • chasing by other horses • kicking by horses • slips, trips and falls • horse injured in fence
Catch Horse	• as above	• rope burn from lead rope
Lead Horse	• as above	• injury to assistant • injury to horse in gateway

Many vague answers were given, indicating that students could not distinguish between a hazard and a risk.