



**GENERAL COMMENTS**

Students generally performed very well on the 2010 examination, with most students making reasonable attempts at all questions on the paper. However, a lack of depth of knowledge of the physiological systems of the horse persists, despite this being commented on in previous Assessment Reports. Only the most successful students displayed consistent and detailed knowledge of all aspects of the study at a Certificate II standard.

Students should be aware of the required skills and knowledge and how these relate to the elements, performance criteria and range statements listed in the units of competence making up Units 3 and 4.

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, only the first three responses were assessed.
- If contradictory answers were given, or answers were repetitive, full marks were not awarded (refer to Question 13).
- Responses that did not address the subject of a question were not awarded any marks.

Students were expected to provide answers that were consistent with the level of knowledge expected of an employee in the equine industry at Certificate II level. Student responses were, in general, brief and to the point. The space provided for each question and the number of marks allocated should have been used as a guide to the length of the answer required. Students should be aware that instructions to ‘describe’ and ‘explain’ are different, and an appropriate response is required in each case.

Students are advised to select carefully from a range of ideas they may have before they commit to writing. They need to ensure they read the question accurately, select the best answer and ensure their answers are not repetitive.

**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	0	1	97	1	
2	15	6	71	8	
3	68	23	5	4	
4	17	0	82	1	
5	3	1	95	1	
6	0	9	83	7	
7	43	22	33	2	Skin conditions can be caused by any of the objects listed. Students were expected to know the common conditions that are caused by these objects.
8	2	92	1	5	
9	13	73	3	10	
10	4	30	21	45	Applying a second pad and another compression bandage (option B) is best as it does not re-expose the wound or allow time for unrestricted bleeding. A tourniquet (option C) is not recommended as on the upper leg it is unlikely to affect a blood vessel.

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Question	% A	% B	% C	% D	Comments
11	20	14	30	35	All students received a mark for this question.
12	18	30	10	41	Prescribed medication can be administered by nominated staff (option B). There is no need for a veterinarian to be present other than to prescribe the medication.
13	3	5	88	3	
14	29	22	9	40	Several specific injuries were identified in this question. Students were expected to know the physiological nature of these injuries and recognise the names of the associated muscles, tendons and ligaments.
15	2	25	8	65	
16	23	38	36	2	Grains are a relatively poor source of lysine (one tenth the quantity of soybean meal) and relatively low in protein (other amino acids).
17	17	42	36	5	Students were expected to have detailed knowledge of common equine diseases. Students must understand terms such as 'symptom'.
18	4	5	5	86	
19	24	31	23	22	In this study, students are expected to recognise the names of major bones in the equine skeleton.
20	9	7	49	36	

## Section B

For each question, an outline answer (or answers) is provided. In some cases the answer given is not the only answer that could have been awarded marks.

### Question 1

Marks	0	1	2	3	Average
%	84	10	5	1	0.2

Bone formation is the principal function. This involves the absorption of calcium and phosphorus.

Deficiency may be associated with bone and joint breakdown and deformities resulting from a decrease in bone density and bone stability. There may also be an imbalance in the calcium to phosphorous ratio. Rickets in young horses can result from a vitamin D deficiency.

This question was very poorly answered, indicating that students' specific knowledge of vitamins was poor.

### Question 2

Answers to this question indicated that some students do not understand the requirements of a professional situation.

#### 2a.

Marks	0	1	2	Average
%	2	38	60	1.6

Answers included:

- confine horse
- anti-rearing bit
- bridle and halter
- lead rope and halter
- holding up opposite foreleg
- applying a twitch
- grasping a fold of skin.

#### 2b.

Marks	0	1	2	Average
%	12	28	60	1.5

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To gain full marks students needed to explain why one of the restraints they listed in Question 2a. would be the most suitable. For example, if a halter and lead rope was identified, a good response would be that this restraint enabled effective control of the horse and flexibility in the handler's location relative to that of the veterinarian.

### Question 3a.

Marks	0	1	2	Average
%	19	37	45	1.3

Figure A



Sickle-hocked

Figure B



Cow-hocked

Students should note that all conformation terms used in this question are listed in the related unit of competence.

### Question 3b.

Marks	0	1	2	3	4	5	Average
%	16	25	27	21	8	3	1.9

#### 3bi.

Injuries include:

- increased strain on back of hock leading to curb (increased chance of straining the plantar tarsal ligament), bone and bog spavin
- strain injury to hock and fetlock
- strain on suspensory ligaments
- bowed tendons.

#### 3bii.

The horse in Figure A would have an inability to track up. It would also be slower than a horse with straighter hind legs.

#### 3biii.

The conformation in Figure A would be an advantage in activities such as pulling carts or reining and in some breeds such as Tennessee Walkers. Sickle hocks in standard-bred trotters may be acceptable.

#### 3biv.

A cow-hocked horse may have great hindquarter manoeuvrability, but in performance horses the fault creates more problems than it solves. The conformation would be a disadvantage in any situation involving stopping, turning and sliding.

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## Question 4

Splints are a common condition and students should have been able to differentiate between the splint bones and the condition.

### 4a.

Marks	0	1	Average
%	56	44	<b>0.5</b>

A 'splint' is the clinical name for the bony enlargement of one of the small metacarpal or metatarsal bones. It is also described as a bony swelling on the side of the cannon bone or splint bone. A splint is an inflammation and reaction of the periosteal tissue covering the small splint bones.

### 4b.

Marks	0	1	2	Average
%	8	44	47	<b>1.4</b>

Causes could include (any two of):

- concussion
- direct trauma such as that from a kick or knock
- poor conformation of lower leg or uneven trimming of the feet (both of which place uneven stress on the joints of the leg).

To obtain two marks the causes needed to be distinct.

## Question 5

Marks	0	1	2	3	Average
%	1	5	30	64	<b>2.6</b>

Any three of:

- the farrier may have driven a nail into the sensitive tissues of the foot (too close to the white line) causing lameness
- trimmed feet of unequal size, placing uneven stresses on the joints
- incorrectly fitted shoes
- incorrectly trimmed feet.

## Question 6

Marks	0	1	2	Average
%	90	9	1	<b>0.1</b>

Fat-soluble vitamins are able to be stored in large amounts in the body (fat and liver tissues). They are more likely to be toxic when fed in excessive amounts and are not excreted in urine.

This question was poorly answered.

## Question 7a.

Marks	0	1	Average
%	87	13	<b>0.2</b>

The required number was AS/NZS 3838.

This question was very poorly answered, showing students' lack of specific knowledge.

## Question 7b.

Marks	0	1	2	3	Average
%	3	5	43	49	<b>2.4</b>

The helmets should be clean enough for correct adjustment. Helmets should be cared for to ensure they are not damaged by dropping or hitting as this will affect the inner structure and may render the helmet void.

The helmet should be replaced if:

- there is a new Australian/New Zealand Standard (AS/NZS)
- the inside lining is damaged

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- the AS/NZS sticker is removed, thus voiding the article
- the helmet is too old (more than five years old is generally the accepted standard of a helmet being 'too old', although different organisations set different standards)
- it no longer fits the user.

## Question 8a.

<b>Marks</b>	<b>0</b>	<b>1</b>	<b>Average</b>
%	39	61	<b>0.6</b>

Either of:

- balance is the correct weight distribution between the front and rear of the horse – balanced carriage. Light in hand and carrying increased weight in hindquarters
- balance is the proportion of all elements of the body. Correctness of bone structure and musculature in relation to each other and related to usage of breed.

## Question 8b.

<b>Marks</b>	<b>0</b>	<b>1</b>	<b>Average</b>
%	28	72	<b>0.7</b>

This overall balance is important because it enables:

- optimum movement and impulsion
- easier carriage of rider
- efficient work
- reduced risk of injury to horse.

## Question 8c.

<b>Marks</b>	<b>0</b>	<b>1</b>	<b>Average</b>
%	34	66	<b>0.7</b>

Front end

## Question 9a.

<b>Marks</b>	<b>0</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>Average</b>
%	0	0	0	1	6	15	16	62	<b>6.3</b>

1	poll
2	croup
3	hoof
4	pastern
5	fetlock
6	point of shoulder
7	ergot

## Question 9b.

<b>Marks</b>	<b>0</b>	<b>1</b>	<b>Average</b>
%	15	85	<b>0.9</b>

Knee (carpus)

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## Question 10a.

Marks	0	1	2	3	Average
%	5	12	35	47	2.3

Swelling, heat, painful to touch, cut or abrasion

Resting a (hind) foot was not accepted.

## Question 10b.

Marks	0	1	2	Average
%	1	22	77	1.8

### 10bi.

Loose, missing or raised clenches; twisted or broken shoes or hoof overgrowing shoe

### 10bii.

Various answers describing the injury risk linked to this problem. For example, if a student answered 'twisted shoe', a related injury risk would be 'injury to paired leg caused by contact with the twisted shoe'.

## Question 11

Marks	0	1	2	3	4	Average
%	5	17	28	30	21	2.5

Records could include:

- what is fed
- amount fed
- times fed
- amount of feed left and the other feed sources available to the horse such as hay or pasture
- requirements for adding water
- abnormal feeding behaviour
- water consumption.

This question assessed students' knowledge of professional stables.

## Question 12

Marks	0	1	2	3	4	5	6	Average
%	0	2	11	32	26	12	17	3.9

Answers could have stated:

- stable the sick horse as far away from the other horses as possible, in a separate building if available
- set aside buckets, feed measures, stable-cleaning equipment, other utensils and rugs for the sick horse, and store them separately
- when cleaning and caring for the sick horse, use disposable materials such as gloves and paper towels instead of rags and sponges that can carry infection
- one person should care for the sick horse where possible. If that person must care for other horses, they should tend to sick horse last and wash their hands and change clothes before returning to other horses
- after use, disinfect the stables, buckets, feed tubs and any equipment used by the sick horse
- have a tray of disinfectant/water outside the sick horse's box and walk through this tray every time you leave the box
- take the temperature of all other horses in the morning and at night during the quarantine period
- stop all travel of horses to and from your stable
- ensure visitors to the stable who have contact with other horses are aware of the quarantine status and implement hand washing and clothes changing where necessary
- review vaccination program and take appropriate action
- burn all bedding.

Students needed to show their understanding of the significance of a 'notifiable' disease. They also needed to be aware of the meaning of some key terms; for example, 'clean' does not mean the same thing as 'disinfect'.

Students were required to identify an action and discuss it; however, features of effective quarantine were often listed without further discussion.

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## Question 13

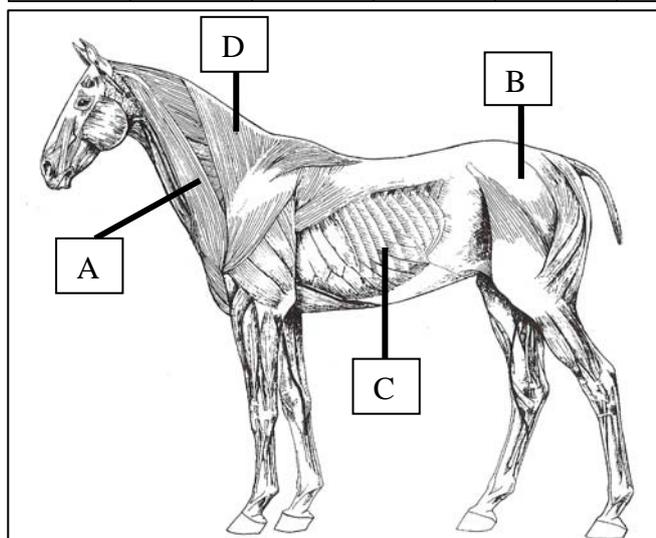
Marks	0	1	2	3	4	5	6	7	8	Average
%	7	18	21	23	13	12	4	1	1	2.8

Faults in the way a horse moves	Description of fault	Related conformation feature
forging	Horses that forge, hit the toe of the hind foot against the sole of the fore on the same side. This often occurs at a slow trot.	The horse is moving out of balance, either in the foot specifically or in the entire body.  When the hind leg is longer than the fore or the stride is extended behind, the back foot may hit the front foot. This also may occur with 'downhill' horses, which are taller at the hip than at the withers.
over-reaching	<b>Occurs when the toe of the hind foot extends forward and strikes the heel, coronary band, fetlock or flexor tendon of the forefoot on the same side.</b>	The horse is moving out of balance, either in the foot specifically or in the entire body. Short back and relatively long legs.
interfering or brushing	A lateral gait defect. The limb swings sideways and connects with the opposite leg.	narrow chests and/or toed-out horses  base narrow
plaiting or rope-walking	<b>Front or hind feet travel in an inward arc and land more or less directly in front of the opposite front or hind foot.</b>	

Students' answers indicated a lack of specific knowledge about conformation and the related descriptions. In this question, repetition was allowed in the 'related conformation feature' column.

## Question 14

Marks	0	1	2	3	4	Average
%	8	16	31	26	19	2.3



This question indicated the expected level of specific knowledge of muscle names. Students are not required to recall muscle names but are required to recognise the names and know the location of major muscles.

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## Question 15

Marks	0	1	2	3	4	5	6	Average
%	5	6	18	22	23	16	10	3.4

Treatment	When to use this treatment	Examples of this treatment
heat	chronic lameness or injuries more than two days old	<ul style="list-style-type: none"> <li>liniments with or without bandages or wraps</li> <li>topical creams or ointments containing capsaicin</li> <li>epsom salts soaks</li> <li>poulticing</li> </ul>
cold	for acute or recent injuries and lameness	<ul style="list-style-type: none"> <li>cold-water hosing</li> <li>bandages soaked in iced water</li> <li>ice packs</li> <li>alcohol rubs</li> </ul>

Students were expected to clearly distinguish between the circumstances requiring heat or cold treatment.

## Question 16a.

Marks	0	1	2	Average
%	0	8	92	1.9

Any two of:

- helmet
- vest or body protector
- goggles
- appropriate clothing
- gloves.

## Question 16b.

Marks	0	1	2	3	4	Average
%	3	10	25	18	44	2.9

### 16bi.

Students needed to explain why they needed Item 1. If item 1 was a helmet, the need could be 'to protect against injury from a kick to the head or injury as a result of a fall'

### 16bii.

Students needed to give an assessment of Item 2's suitability. If Item 2 was gloves, the suitability would be assessed by 'the gloves being the correct size and the correct material to protect the hands while handling ropes'.

## Question 17

Marks	0	1	2	3	4	Average
%	24	13	33	10	20	1.9

Answers included:

- increase in water requirements as excess nitrogen must be voided via the kidneys
- greater urea excretion as urea levels in the blood increase. This affects cleaning requirements of the loose box or yard if the horse is stabled
- the body becomes over-acidic and requires more minerals in the blood as a buffer and to alkalise the body. If minerals aren't available in the blood they will be leached from bones, ligaments and tendons
- the horse will drink lots of water and urinate more frequently, leading to dehydration, especially in hot weather or while undertaking strenuous exercise. These horses typically have thick, foamy sweat that does not cool them as effectively as thin, watery sweat, so they end up sweating more, which dehydrates the body further
- obesity and excessive energy as protein is a secondary source of energy. If excess protein is not worked off then it will be deposited as body fat
- protein bumps/hives/urticaria – small hard lumps that occur from excess protein. Often in saddle area.

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Some students' knowledge of how an excess of protein might affect a horse could be improved. Students were required to identify negative effects and explain why they occurred.