



NATIONAL SENIOR CERTIFICATE EXAMINATION
NOVEMBER 2011

EQUINE STUDIES

Time: 3 hours

200 marks

PLEASE READ THE FOLLOWING INSTRUCTIONS CAREFULLY

1. This question paper consists of 9 pages.
 2. You are required to answer **all** the questions.
 3. All answers are to be written in the Answer Book provided to you.
 4. Answers must be numbered exactly as the questions are numbered.
 5. Read the questions carefully.
 6. It is recommended that you spend approximately 1 hour on each section.
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SECTION A**QUESTION 1**

Complete the missing information on the table below. Write only the question number in your Answer Book with the answer next to the number.

Nutrient	Shortage		Excess	
	Condition	Symptoms	Condition	Symptoms
Carbohydrate	Weight loss	Poor covering of bones, prominent ribs and pelvis, hollow neck.	1.1 _____	Ribs not palpable, development of crest, sluggish exercise tolerance.
	1.2 _____	Foal sucks for longer than usual, does not sleep after feeds. Poor growth.	Orthopaedic developmental disease.	1.3 _____ 1.4 _____
Protein	Protein starvation	1.5 _____	Diarrhoea	1.6 _____
	1.7 _____	Inability to conceive, repeat returns to stallion.		
Roughage	Spasmodic colic	1.8 _____ 1.9 _____	1.10 _____	Small, hard or absent droppings; low grade, dull pain; horse lies down a lot.

[10]**QUESTION 2**

Describe the terms relating to equine health care below.

- 2.1 Diuretic
- 2.2 Endoscope
- 2.3 Nephritis
- 2.4 Prognosis
- 2.5 Acute
- 2.6 Chronic
- 2.7 Haematoma
- 2.8 Congenital
- 2.9 Cardiovascular
- 2.10 Hobday operation

[10]

QUESTION 3

Name the disease that causes the horse to exhibit the symptoms described below.

- 3.1 Swollen head, fluctuating temperature.
- 3.2 Stiffness and rigidity of whole body, third eyelids partially cover eyes.
- 3.3 Dry cough, nasal discharge, high temperature.
- 3.4 Hyper-excitability, possible aggressive behaviour, paralysis develops.
- 3.5 Bilateral nasal discharge, swelling of lymph nodes under neck.
- 3.6 Very high temperature, yellowing of gums and eyes.
- 3.7 Raised temperature, nasal discharge, cough, abortion in pregnant mares.
- 3.8 Respiration rapid and shallow, cough, nasal discharge, high temperature, moisture can sometimes be heard moving as horse breathes in and out.
- 3.9 Circular lesions about 1 – 3 cm in diameter on horse's coat.
- 3.10 Clumsiness, particularly in hind limbs. Condition can progress to exaggerated, drunken movements.

[10]**QUESTION 4**

Name and explain the five 'freedoms' that all equines are entitled to.

[10]**QUESTION 5**

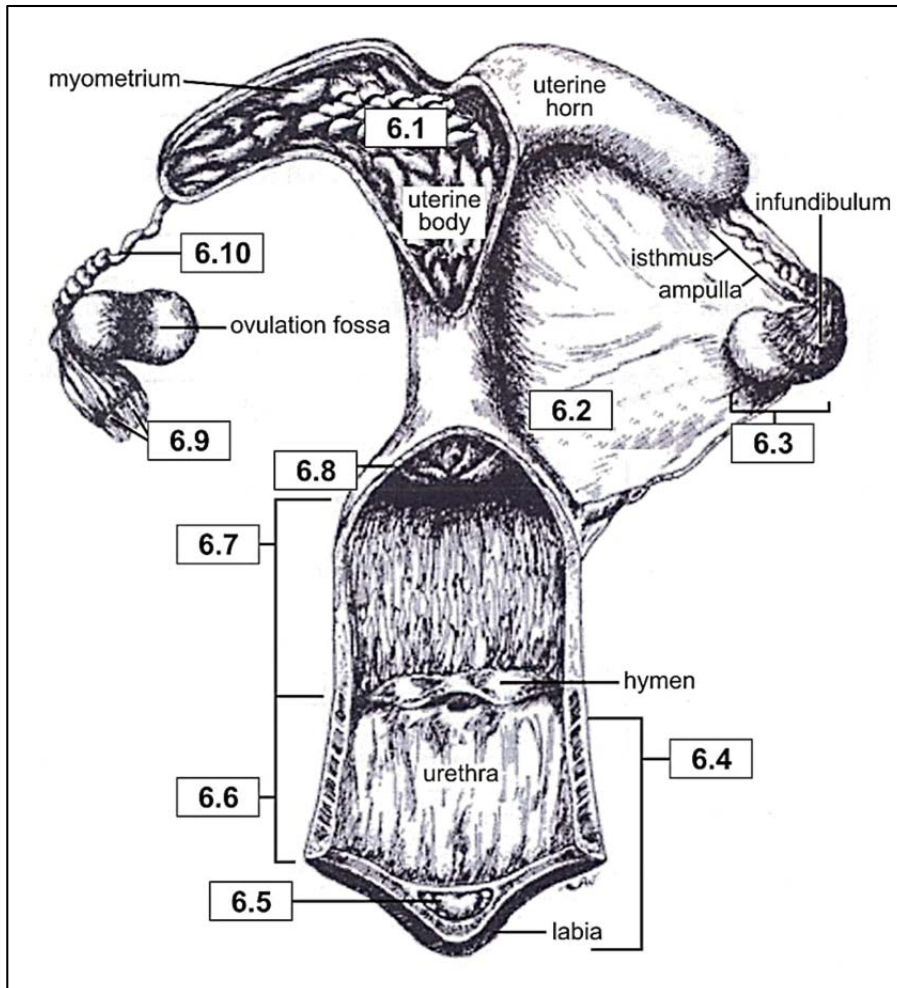
Match the disease in Column I with the treatment in Column II. Write only the question number and letter of the correct corresponding treatment.

Column I	Column II
5.1 Urticaria	A Isolation of animal, antifungal application
5.2 Mud fever	B Oral anthelmintic, box rest
5.3 Mange	C Manual removal of irritants, bath with soothing shampoo
5.4 Ringworm	D No specific treatment needed, resolves by itself
5.5 Sweet itch	E Wash off scabs with soap, dry very thoroughly and apply Vaseline or antiseptic ointment
	F Clip long coated horses, weekly baths or dressings for a month
	G Prevention is better than cure; application of soothing lotions

[5]

QUESTION 6

Label the following diagram. Write only the question number in your Answer Book with the term next to the number.

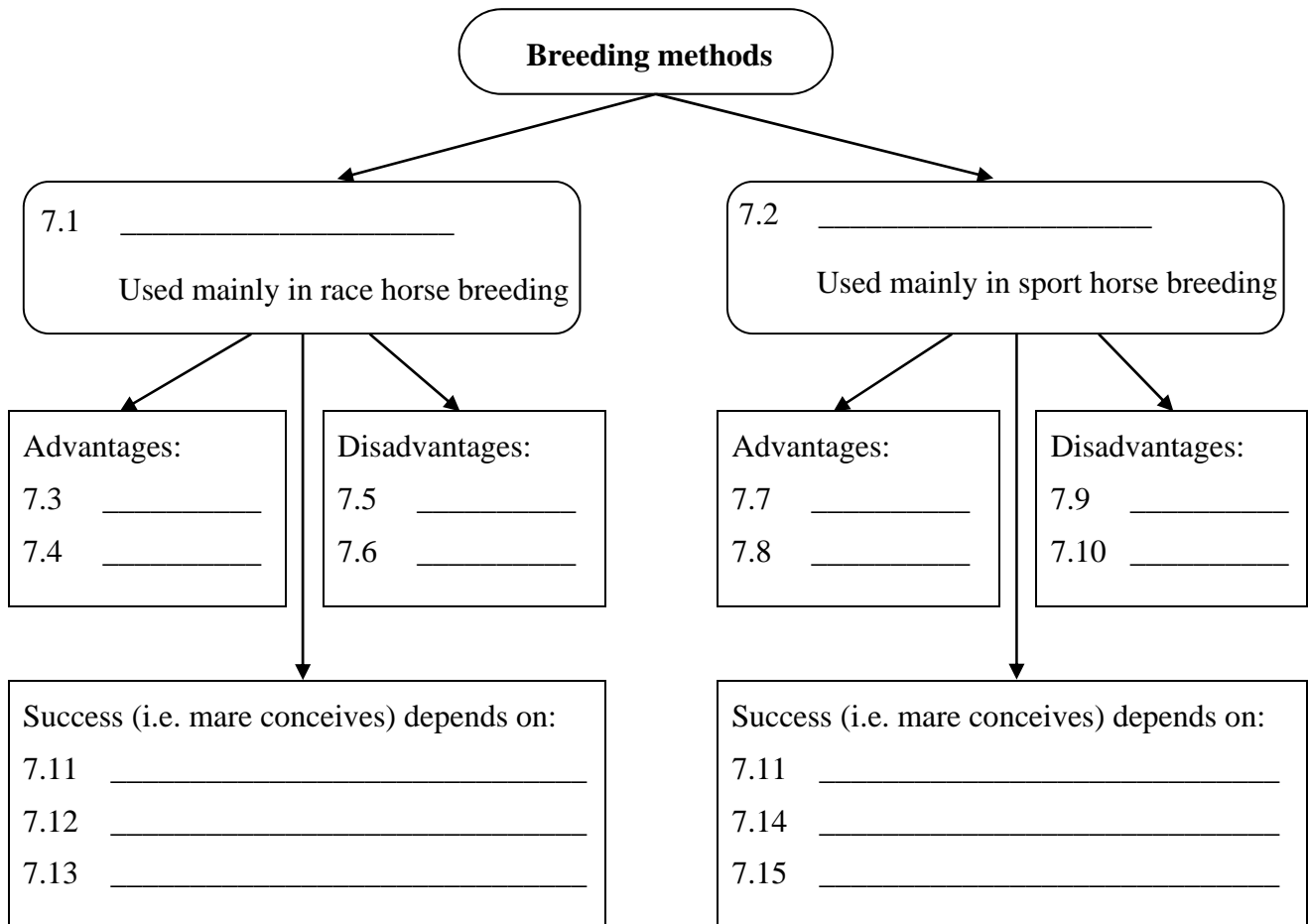


[<www.hullhorsehaven.com/mareanatomy.html>]

[10]

QUESTION 7

Complete the mind map below. Write only the question number and corresponding information in your Answer Book.

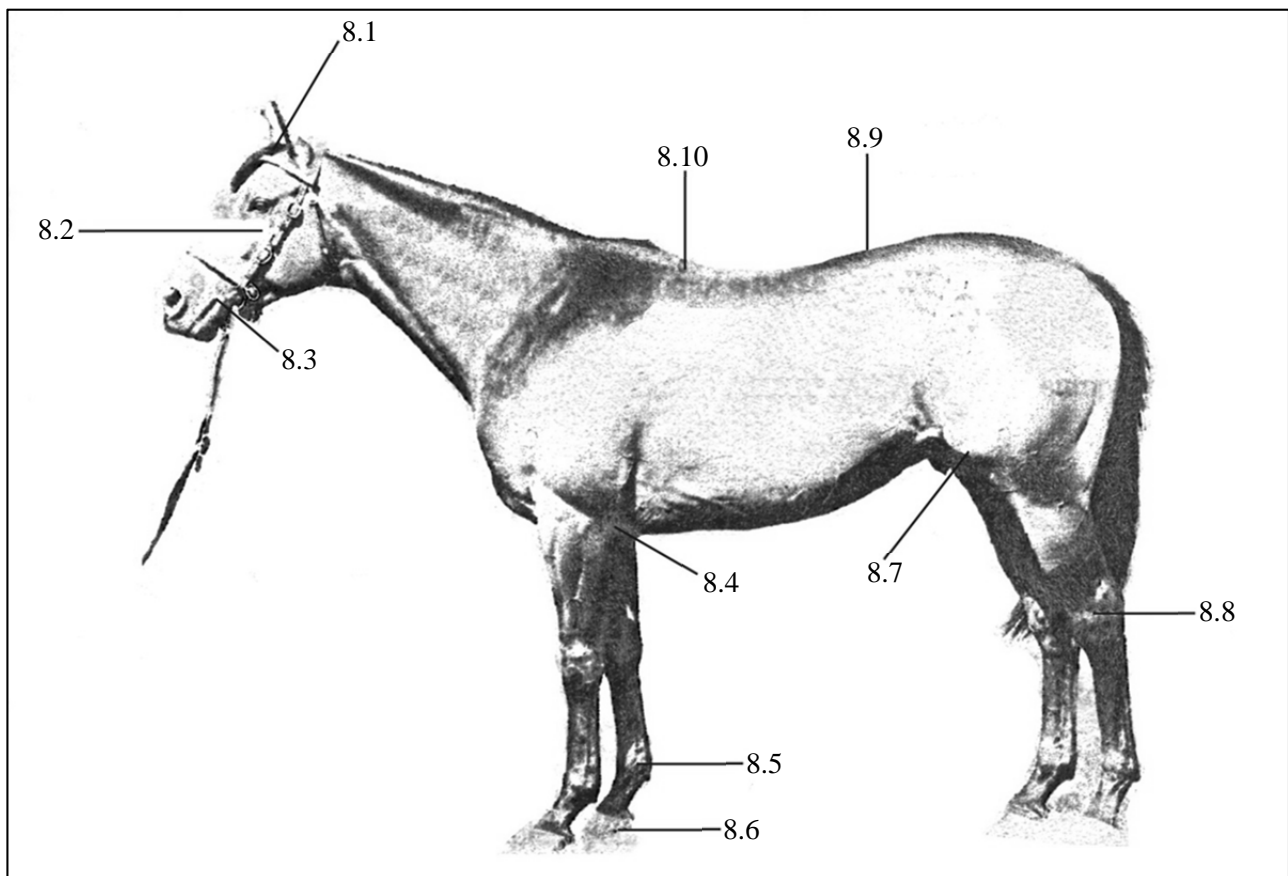
**[15]**

QUESTION 8

Mark on the diagram the location of the following ailments:

Write the question number and the corresponding ailment from the list below.

Poll evil
Wolf tooth
Kissing spine
Locking stifle
Arthritis
Sinusitis
Capped elbow
Sesamoiditis
Navicular syndrome
Saddle sore



[10]

80 marks

SECTION B**QUESTION 9**

Study the information below found in a product brochure from a feed company and answer the questions that follow.

SAMPLE DAILY FEEDING GUIDE	Vuma Concentrate¹	Lucerne Hay	Eragrostis Hay²
Maintenance and Light Work	1 – 3 kg	–	2.5 – 7 kg
Medium Work	2 – 5 kg	1 – 2 kg	3 – 8 kg
Full Work	4 – 7 kg	1 – 2 kg	3 – 6 kg

[<<http://www.vumafeed.co.za>>]

- 9.1 Give an example of the following work programs referred to in the brochure:
- 9.1.1 Light work (1)
- 9.1.2 Medium work (1)
- 9.1.3 Full work (1)
- 9.2 Why is Lucerne hay included for horses in medium and full work? (1)
- 9.3 Why is the daily feed weight given within a range of values? (1)
- 9.4 How would you adjust the feeding of a horse that was unwell due to receiving 7 kg concentrate and 1 kg Lucerne per day? (2)
- 9.5 Why is it essential to the health of the horse to keep hay consumption high? (3)
- [10]**

QUESTION 10

Study the quote below and answer the questions that follow.

In compiling a diet remember the ideal proportion of ingredients – Carbohydrate, two thirds; Protein, one sixth; Fat, one sixth.

[Mary Rose FBHS, *The Horsemasters Notebook*, 1972]

- 10.1 Would you agree with this statement if you were feeding a two year old Warmblood colt? Explain your answer. (5)
- 10.2 Would you agree with this statement if you were feeding a mature endurance horse? Explain your answer. (5)
- [10]**

QUESTION 11

An eight year old showjumper in hard training is exhibiting the following symptoms: lack of muscle; thinness; poor appetite; bony prominences more pronounced; obvious loss of weight; poor performance. This horse weighs approximately 650 kg.

Suggest a **feeding program** and **schedule** that will suit the needs of this horse and will help to alleviate the symptoms he is displaying.

[10]**QUESTION 12**

The types of muscle fibres that are found in the horse are: slow twitch muscle fibres; fast twitch low oxidative muscle fibres and fast twitch high oxidative muscle fibres.

- 12.1 Explain in what proportion you would expect to find each muscle fibre type in the gluteal muscle of a dressage horse. (3)
- 12.2 Describe the function of each muscle fibre type in the dressage horse mentioned above. (3)
- 12.3 If this horse was put into flat racing training would you expect to see any changes in the proportion mentioned above? Explain your answer. (4)

[10]**QUESTION 13**

A horse in your care is suffering from tetanus. You have spotted the symptoms early and your vet has arrived to treat the horse.

- 13.1 In your discussion with the vet he explains the **cause** of this disease. Write down what you would expect him to have said. (3)
- 13.2 Discussion with your vet continues and you begin to discuss general agents of disease. Write down two other agents, other than the one that causes tetanus, and give an example of a disease caused by each agent you give. (4)
- 13.3 Your vet administers an injection to this horse which rapidly alleviates the symptoms. Explain what is in this injection and why it alleviates the symptoms so rapidly. (2)
- 13.4 What supportive treatment could you, the stable manager, have given to this horse while waiting for the injection the vet has administered to work? (2)
- 13.5 Your vet stresses the importance of administering an annual vaccine to all horses to prevent tetanus.
 - 13.5.1 Is this vaccine the same as the one she has administered to the sick horse? (1)
 - 13.5.2 Explain your answer above. (1)
- 13.6 Before she leaves, your vet reminds **you** to have an anti-tetanus vaccine done at your local pharmacy. Why must you also have a vaccine? (2)

[15]

QUESTION 14

Read the following description of a mating and answer the question below.

Choose a breeding area that is outside the stables. This area must have a level surface, good traction and be away from physical barriers. The mare is restrained by a halter and wears no other equipment. The mare's tail is bandaged and her vulva is washed with water and a strong liquid soap. The stallion is then allowed to approach the mare at the speed he chooses. Once the stallion achieves an erection his penis will be washed with warm water. The stallion is then permitted to approach the mare, mount and breed.

Identify areas of weakness in the above description and explain **how** and **why** you would adjust the mating program to eliminate the areas of weakness you have identified.

[15]

70 marks**SECTION C**

A pony got into the feed room and has gorged himself on cubes. He is found after at least an hour and is returned to his stable.

Describe the types of colic this pony is at risk from in terms of the passage of the cubes through the digestive system and the excess of nutrients. Be sure to link the process of digestion and the strain it is put under in this situation to the occurrence of the different colic types. As part of your answer briefly state how each colic would be attended to.

5 marks will be awarded for style and structure of your essay.

50 marks

Total: 200 marks