

THE ROYAL COLLEGE OF VETERINARY SURGEONS
DIPLOMA EXAMINATION IN VETERINARY DERMATOLOGY

Tuesday 22 August 2000

PAPER 1
(3 hours)

Candidates are required to answer **FOUR** questions only.

Illegible handwriting or failure to answer the question in the form requested may result in examiners being unable to award marks for information which candidates intended to convey.

1. What is meant by the term “staphylococcal virulence factors.” Indicate how these factors are thought to contribute to the pathogenesis of staphylococcal skin infections in dogs, pigs and man.
2. Describe the current hypotheses that are thought to be involved in the regulation of IgE synthesis.
3. Compare the structure of the various collagens found in the skin to elastin. Indicate how the structure of each molecule is related to its function.
4. Describe the process of apoptosis, including the morphological and biochemical changes that take place. Include in your answer a list of the skin diseases that occur in dogs in which apoptosis is known to occur.
5. Give an account of the formation of keratins in mammalian skin and its adnexae.

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Tuesday 22 August 2000

**PAPER 2
(3 hours)**

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1. Give an account of the diseases of dogs in which an absence or loss of cutaneous pigment occurs. For each disease, describe the mechanism that leads to the lack of pigment.
2. Give an account of the diseases that may lead to self-induced and spontaneous alopecia of the mane and tail in horses.
3. Describe the immunological studies reported in the literature that have been performed in order to further elucidate the pathogenesis of German Shepherd Dog pyoderma.
4. Describe the haematological and biochemical changes that are likely to occur if a dog is treated with prednisolone at a dose of 2 mg/kg/day and azathioprine at a dose of 2.2 mg/kg/day for three weeks. For each change, indicate whether it is likely to be due to the prednisolone or the azathioprine, and describe the mechanism by which the change occurs.
5. Give an account of the clinical and histological features of the diseases that may lead to mural folliculitis in the cat.

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THE ROYAL COLLEGE OF VETERINARY SURGEONS

DIPLOMA IN VETERINARY DERMATOLOGY

WEDNESDAY 8 AUGUST 2001

PAPER I

(3 hours)

Candidates are required to answer **FOUR** of the following **five** questions **only**.

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If insufficient time is available to answer a question fully, it will be acceptable to complete in note form.

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1. Discuss the relationship between allergen-specific serum IgE and cutaneous hypersensitivity diseases in dogs, cats, horses and humans.
 2. Discuss the role of vitamins in the anatomy and physiology of mammalian skin. How may they be used in dermatological therapy?
 3. Write a detailed account of the anatomy of the canine hair follicle, including the changes that occur during the hair growth cycle. What factors regulate the hair growth cycle?
 4. **List** the structural proteins of the canine epidermis and basement membrane which are of importance in autoimmune skin diseases and name the disease associated with each. Discuss the relationship between the distribution and function of these proteins and the clinical and histological features of each of the disease that you mention.
 5. Give a detailed account of feather structure. Discuss your approach to feather loss in psittacines.
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THE ROYAL COLLEGE OF VETERINARY SURGEONS

DIPLOMA IN VETERINARY DERMATOLOGY

WEDNESDAY 8 AUGUST 2001

PAPER II

(3 hours)

Candidates are required to answer **FOUR** of the following **five** questions **only**.

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1. Give an account of the skin diseases affecting the coronary band of the horse.
2. Give an account of skin diseases of horses caused by nematodes.
3. For each of the following diseases, briefly describe the pathogenesis, histopathology, clinical signs and possible therapeutic options:
 - skin disease of sheep caused by *Hydrotoea irritans*
 - besnoitiosis of cattle
 - leishmaniasis of dogs
 - systemic granulomatous disease of horses
 - swine vesicular disease.
4. Define the terms "follicular dystrophy" and "follicular dysplasia". Describe the histopathology and clinical features of examples of these diseases in dogs.
5. Describe the mode of action of imidacloprid, selamectin and fipronil. What are the advantages and disadvantages of these products when used as spot-on treatments in dogs and cats with flea allergy dermatitis?

THE ROYAL COLLEGE OF VETERINARY SURGEONS

DIPLOMA IN VETERINARY DERMATOLOGY

TUESDAY 30 JULY 2002

PAPER I

(3 hours)

Candidates are required to answer **FOUR** of the following **five** questions.

Allow 45 minutes per question.

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1. Describe in detail the various mechanisms whereby autoimmune diseases are thought to develop. Where possible, illustrate your answer with examples from autoimmune dermatoses.
 2. Describe in detail the various histological methods of classifying panniculitis. How may dermatohistopathology aid diagnosis of the various causes of panniculitis?
 3. How may sunlight cause damage to the skin and what mechanisms operate to protect the skin from damage? Make a **list** of skin diseases in the horse where sunlight may play a role in the aetiology, describe briefly the aetiology of each disease.
 4. Discuss the structure and function of keratin. How can defects in keratin synthesis cause disease? Illustrate your answer with specific examples.
 5. *“Generalised demodectic mange is the consequence of a specific, inherited T cell defect”*. Discuss this statement in light of the current knowledge of canine demodectic mange.
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DIPLOMA IN VETERINARY DERMATOLOGY

TUESDAY 30 JULY 2002

PAPER II

(3 hours)

Candidates are required to answer **FOUR** of the following **five** questions.

Allow 45 minutes per question.

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1. Compare and contrast the use of systemic antibiotic therapy to treat *staphylococcal* skin diseases in the dog and horse.
 2. **List** the important biting insects that affect large animals. How do biting insects cause dermatological disease? Describe in detail an example of an insect mediated disease in the horse, cow, sheep and pig.
 3. Using the current knowledge of the aetiopathogenesis of atopic dermatitis, indicate how various therapeutic interventions and management strategies may be helpful in the treatment of this condition.
 4. Discuss the clinical presentation, diagnosis and therapy of each of the following diseases in the cat:
 - a. Sporotrichosis
 - b. Feline rhinotracheitis infection
 - c. Dracunculiasis
 - d. Opportunistic mycobacterial infection.
 5. Describe in detail the various types of tumours associated with histiocytes that may cause canine and feline skin disease. Include in your answer how cell surface markers have helped in the classification of these conditions.
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THE ROYAL COLLEGE OF VETERINARY SURGEONS

DIPLOMA IN VETERINARY DERMATOLOGY

THURSDAY 17 JULY 2003

PAPER I

(3 hours)

Candidates are required to answer **FOUR** of the following **five** questions.

Allow 45 minutes per question.

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1. Describe in detail the innate (natural) immune response that may occur when canine skin is invaded by *Staphylococcus intermedius*.
 2. **List** the main mediators of itch and describe the neuronal pathways that are thought to be involved in itch.
 3. Give an account of the cellular and non-cellular components of the dermis. Include their origin and their function within the dermis.
 4. Describe in detail the origin, structure and function of epidermal melanocytes and the factors influencing melanisation,
 5. Give a detailed account of the biology of *Ctenocephalides felis*. Discuss the epidemiological factors influencing exposure of pets to fleas in an urban environment.
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DIPLOMA IN VETERINARY DERMATOLOGY

THURSDAY 17 JULY 2003

PAPER II

(3 hours)

Candidates are required to answer **FOUR** of the following **five** questions.

Allow 45 minutes per question.

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1. Write **short notes** on:
 - a. Caseous lymphadenitis in sheep.
 - b. Pityriasis rosea (Porcine juvenile pustular psoriasiform dermatitis, pseudo-ringworm).
 - c. Photosensitisation in cattle.

 2. Discuss the role of the mast cell, eosinophil and lymphocyte in canine and human atopic dermatitis.

 3. Compare and contrast the use of prednisolone and cyclosporin in canine dermatology. Describe their mode of action, administration protocols and monitoring requirements.

 4. Review the current evidence for and against a hypersensitivity-mediated mechanism for "food allergy" in the dog. Quote references where appropriate.

 5. Describe the dermatological syndromes that may be associated with endocrinologically functional neoplasms
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THE ROYAL COLLEGE OF VETERINARY SURGEONS

DIPLOMA IN VETERINARY DERMATOLOGY

WEDNESDAY 14 JULY 2004

PAPER I

(3 hours)

Candidates are required to answer **FOUR** of the following **five** questions.

Allow 45 minutes per question.

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1. Compare and contrast apoptosis and necrosis as mechanisms of cell death.
 2. Give an account of the embryological development of the skin and its appendages.
 3. In the examination of skin biopsies, pattern recognition provides vital clues to the pathogenesis and aetiology of many dermatopathies. Discuss the above statement using perivascular dermatitis and vesicular/pustular dermatitis as examples to illustrate your answer.
 4. Give an account of the mechanisms involved in wound healing, with particular reference to factors that may have an adverse influence on this process.
 5. Describe the components of the skin immune system and their interactions in response to colonisation by a bacterial pathogen.
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DIPLOMA IN VETERINARY DERMATOLOGY

WEDNESDAY 14 JULY 2004

PAPER II

(3 hours)

Candidates are required to answer **FOUR** of the following **five** questions.

Allow 45 minutes per question.

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1. Write **short notes** on the following:
 - a. Syringohydromyelia (Arnold Chiari Syndrome) in dogs.
 - b. The pharmacology of the synthetic retinoids and their use in veterinary dermatology.
 - c. Canine familial vasculitis.

 2. Write **short notes** on:
 - a. Dermatophilosis in ruminants and camelids.
 - b. Infections causes of skin lesions of the bovine teat. Which are zoonotic?
 - c. Parasitic skin diseases of the sheep.

 3. Discuss the evidence for the role of *Malassezia* organisms as pathogens.

Give an account of the clinical syndromes in the dog, cat and horse where *Malassezia* species have been implicated.

 4. What do you understand by the term 'grease heel' in equine dermatology? How would you approach such a case in practice?

 5. **List** the paraneoplastic disorders that may affect the skin of the dog and cat. For **TWO** conditions, describe the clinical and histopathological features, including aetiopathogenesis and prognosis.
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