



**AUSTRALIAN AND NEW ZEALAND
COLLEGE OF VETERINARY SCIENTISTS**

MEMBERSHIP GUIDELINES

Veterinary Behaviour

INTRODUCTION

These Membership Guidelines should be read in conjunction with the *Membership Candidate Handbook*.

ELIGIBILITY

Refer to Section 2 of the *Membership Candidate Handbook*.

OBJECTIVES

To demonstrate that the candidate has sufficient knowledge of veterinary behaviour to be able to give sound advice to clients on problems and procedures commonly encountered in this field at the level of general veterinary practice. Membership level indicates an advanced practitioner, representing a middle-tier of knowledge, competence and experience in a specific area of veterinary behaviour. Membership is not a specialist qualification.

LEARNING OUTCOMES

A. The candidate will have a **sound**¹ knowledge of the following:

1. Ethology
 - 1.1. Theoretical
 - 1.1.1. Tinbergen's questions
 - 1.1.2. Sexual, maternal, communicative, social, feeding, eliminative, shelter seeking, investigative, allomimetic (self-care)
 - 1.1.3. Individual behaviour and its development: indication of temperament, indication of perception, cycles of behaviour, time budgets, fear and territorial behaviour, navigation, migration, thermoregulation, and responses to intra and interspecies communication.
 - 1.1.4. Group behaviour: recognition of species and group members, communication within and between groups, dynamics of groups including territory, home range, predator avoidance, protection of group, effectiveness of strategies such as mutual grooming for group cohesion.

- 1.2. The behaviour considered to be species-typical, appropriate to the importance of the Australia and New Zealand species, of the following, within:
 - 1.2.1. dogs, cats, pet bird species, horses, rabbits, guinea pigs, ferrets, rats and mice
 - 1.2.2. cattle, sheep, pigs, deer, goats, fowl and alpaca.

2. Neuroscience
 - 2.1. Inter-neuron communication
 - 2.1.1. Neurotransmitters and Neuromodulators

3. Psychology
 - 3.1. Learning theory
 - 3.1.1. The principles and practice of learning theory and how it applies to behaviour modification and training. An essential understanding of the principles and application of: dimensions of learning, instinct vs learned behaviours e.g. imitation and observational learning, trial-and-error learning, learned helplessness, the nature of memory.
 - 3.1.2. Classical and Operant Conditioning
 - 3.1.3. Salience, Generalisation and Discrimination
 - 3.1.4. Imitation and observational Learning
 - 3.1.5. Memory- working, long term,
 - 3.2. Emotions- definition, basic emotions Panksepp's model: Seeking, Rage/Anger, Lust, Care, Panic/Grief, Play
 - 3.3. Cognitive Processes
 - 3.3.1. Sensory coding
 - 3.3.2. Perception
 - 3.3.3. Attention

4. VBM
 - 4.1. Genetics, Environment and Learning
 - 4.2. The definitions for neurotypical, abnormal, acceptable, unacceptable, adaptive, and maladaptive behaviour and consideration of the following with regard to these behaviours:
 - 4.2.1. obtaining a thorough history
 - 4.2.2. differential diagnoses
 - 4.2.3. possible aetiologies (including medical conditions) and their welfare implications
 - 4.2.4. appropriate treatment options, where applicable, including behaviour modification strategies for the animal and the owners, environmental management and / or use of behavioural medications including nutraceuticals, including diets and pheromones (together with medical or surgical treatment as required).
 - 4.2.5. effects of disease states on behaviour

B. The candidate will have a **basic** understanding of the following:

1. Ethology
 - 1.1. The behaviour considered to be species-typical, appropriate to the importance of the **Australia and New Zealand** species, of the following Native species:
 - 1.1.1. Avians
 - 1.1.2. Marsupials
 - 1.1.3. Monotremes
 - 1.1.4. Placental Mammals
 - 1.1.5. Reptiles
2. Neuroscience
 - 2.1. Neuroanatomy
 - 2.2. Neuroendocrinology
 - 2.3. Neurophysiology
 - 2.4. Psychopharmacology
3. Psychology
 - 3.1. Personality- comparative, optimism, resilience
4. Veterinary Behaviour Medicine
 - 4.1. Pet Ownership:
 - 4.1.1. advantages and disadvantages for the pets and the community
 - 4.1.1.1. selection of appropriate pets and provision of suitable environments
 - 4.1.1.2. animal management strategies in urban, peri urban, rural and remote communities with regard to community concerns and implications for animal control and welfare an understanding of the human-animal bond and how this can impact on pet behaviour and longevity.
5. Welfare
 - 5.1. An understanding of how knowledge of behaviour can be used as an indicator of an animal's welfare
 - 5.1.1. The Five Domains
 - 5.1.2. Compassionate Care
 - Low Stress Handling and Co-operative Care
 - Animal consent
 - Response substitution
 - 5.2. Facilities and equipment for training, handling, examination, transportation and housing of companion animals and domestic livestock:
 - 5.2.1. Advantages and disadvantages of different facilities, equipment, handling methods on
 - clinical examination
 - neurological examination
 - fitting equipment such as harnesses, collars, head collars (canine, large animals), muzzles.
 - 5.2.2. Compassionate Care handling techniques- examination, blood sampling, temperature, catheter placement, tableting/injections regularly used with conscious animals.
 - 5.2.3. and how the above is applied for companion animals and domestic livestock.
 - 5.3. The behaviour of intensively housed production animals and wild animals in establishments such as companion animal breeding facilities, shelters, zoos, circuses and oceanariums:
 - 5.3.1. constraints of a restricted environment and how these may be addressed
 - 5.3.2. effects of these constraints on behaviour

- 5.3.3. management implications
- 5.3.4. welfare concerns
- 5.3.5. balancing multiple aims for animals in captivity – animal welfare, conservation, education, research, recreation, entertainment.
- 5.3.6. discuss possible management techniques for intensively housed and captive animals.
- 5.3.7. address methods of assessing success of management techniques

- C. The candidate will be able to discuss the following technical procedures with **sound**² expertise:
- a. clinical examination
 - b. neurological examination
 - c. fitting equipment such as harnesses, collars, head collars (canine, large animals), muzzles.
 - d. low stress handling techniques- examination, blood sampling, temperature, catheter placement, tableting/injections regularly used with conscious animals.

¹ **Knowledge levels:**

Sound knowledge — candidate must know all of the principles of the topic including some of the finer detail, and be able to identify areas where opinions may diverge. A middle level of knowledge.

Basic knowledge — candidate must know the main points of the topic and the core literature

EXAMINATIONS

For information on the required standard and format for both the Written and Oral examinations, candidates are referred to the *Membership Candidate Handbook*. The Membership examination has **two separate components**:

- 1. Written Examination (Component 1)**
Written Paper 1 (two hours): Principles of the Subject
Written Paper 2 (two hours): Applied Aspects of the Subject
- 2. Oral Examination (Component 2)**
Oral (one hour)

The written examination will comprise of two separate two-hour written papers taken on the same day. There will be an additional 15 minutes perusal time for each paper, during which no typing is permitted. The exam may include a series of short answer questions, multiple-choice questions or may require an essay-type response. The exam is worth a total of 120 marks and all questions must be answered. Allocated marks to each question/sub question will be clearly indicated.

Written Paper 1:

This paper is designed to test the candidate's knowledge of the principles of veterinary behaviour as described in the Learning Outcomes.

Written Paper 2:

This paper is designed to (a) test the candidate's ability to apply the principles of veterinary behaviour medicine to particular cases/problems or tasks and (b) test the candidate's familiarity with the current practices and issues that arise from activities within the discipline of veterinary behaviour in Australia and New Zealand.

Oral Examination:

This examination requires the candidate to demonstrate achievement of the Learning Outcomes listed earlier. Multimedia is likely to be used during this examination as stimulus for discussion. The duration of this examination is approximately one (1) hour. A number of cases (using video and case history) will be presented with supporting questions asked verbally in a face-to-face setting online. The oral examination has a total of 100 marks.

Additionally, the examiners may ask the candidate to demonstrate the ability to recognise and discuss the fit of commonly used equipment in all species.

RECOMMENDED READING MATERIAL

The candidate is expected to read widely within the discipline, paying particular attention to areas not part of their normal work experiences. This list of books and journals is intended to guide the candidate to some major references and other source material. Candidates also should be guided by their mentors. *The list is not comprehensive and is not intended as an indicator of the content of the examination.*

Recommended Textbooks³

Bear, M.F., Connors, B.W, and Paradiso, M.A. (2020) *Exploring the Brain* 4th Ed, Jones and Bartlett Learning

Crowell-Davis, S., Murray, T.F., and Mattos de Souza Dantas, L., (2019) *Veterinary Psychopharmacology* 2nd Ed Wiley-Blackwell

Denenberg, S. (Ed), (2021) *Small Animal Psychiatry*, CABI

Herron M., (Ed.), Horwitz, D, Siracusa, C.(Eds) (2021) American College of Veterinary Behaviorists,. *Decoding Your Cat: Explaining Common Cat Behaviors and How to Prevent or Change Unwanted Ones*. First Mariner Books

Horwitz, D.F., , Ciribassi, J., (Eds), American College of Veterinary Behaviorists,) (2015). *Decoding Your Dog: Explaining Common Dog Behaviors and How to Prevent or Change Unwanted Ones*. First Mariner Books.

Houpt, K.A. (2018). *Domestic Animal Behavior for Veterinarians and Animal Scientists*. (6th ed.). Wiley-Blackwell.

Landsberg, G., Hunthausen, W., & Ackerman, L. (2013). *Behavior Problems of the Dog and Cat*. (3rd ed.). Elsevier Saunders.

Luesher, A.U. (2006). *Manual of Parrot Behavior*. Blackwell.

McGreevy, P., (2012) *Equine Behaviour: A Guide for Veterinarians and Equine Scientists*. Elsevier

McMillan, F.D. (2020), *Mental health of Animals* 2nd Ed CABI

Overall, K. (2013). *Manual of Clinical Behavioral Medicine for Dogs and Cats*. (2nd ed.). Mosby.

Rodan, I. and Heath, S., (Ed.). (2015). *Feline Behavioral Health and Welfare*. Elsevier Saunders

Serpell, J. (Ed.). (2016). *The domestic dog, its evolution, behaviour and interactions with people*. (2nd ed.) Cambridge University Press.

Turner, D.C., & Bateson, P. (2013). *The Domestic Cat: The Biology of its Behaviour*. (3rd ed.). Cambridge University Press.

Tynes, V., (Ed.). (2013). *Behavior of Exotic Pets*. Wiley (incl e-pub).

Yin, S.A. (2009). *Low Stress Handling restraint and behaviour modification of dogs and cats*. Cattle Dog Pub.

Additional Textbooks and Reading

Alcock, J., (2017). *Animal Behavior-an evolutionary approach*. (10th ed.). Sinauer Associates Inc, Massachusetts.

Broom, D., (2021). *Broom and Fraser's Domestic Animal Behaviour and Welfare*. (6th ed.). CABI Publishing

Doidge, N., (2010) *The Brain that Changes Itself*. Scribe Publications

Grandin, T., (Ed.), (2019). *Livestock Handling and Transport, 5th Edition: Theories and Applications*. CABI.

Little, S. (ed), (2011), *The Cat: Clinical Medicine and Management*, (1st Ed) Elsevier Health Sciences

Manning, A., Dawkins, M.S. (2012). *Introduction to Animal Behaviour*. Cambridge University Press.

Miklosi, A., (2016) *Dog Behaviour, Evolution and Cognition*, 2nd Ed Oxford University Press

Nelson, R., (2022) *An Introduction to Behavioral Endocrinology*. (6th ed.). Sinauer Associates Inc.

Panksepp, J. (2004) *Affective Neuroscience: the Foundations of Human and Animal Emotions*, 1st Ed Oxford University Press.

Reid, P., (1996). *Excel-erated learning*. James & Kenneth Publishers.

Scott, J.P., & Fuller, J.L., (1965). *Genetics and the Social Behaviour of the Dog*. Iowa State University Press.

Feline Behaviour Guidelines / Feline Friendly Handling

<https://www.catvets.com/guidelines/practice-guidelines/handling-guidelines>
From the American Association of Feline Practitioners 2011

³ **Definitions of Textbooks**

Recommended textbook – candidates should own or have ready access to a copy of the book and have a sound knowledge of the contents.

Additional references – candidates should have access to the book and have a basic knowledge of the contents.

Feline Behaviour Guidelines / Feline Friendly Handling

<https://www.catvets.com/guidelines/practice-guidelines/handling-guidelines>
From the American Association of Feline Practitioners 2022

Journals⁴

Journal of Veterinary Behaviour Clinical Applications and Research

Applied Animal Behaviour Science

Animal Behavior

Anthrozoös

Alcock, J. (2013). *Animal Behavior-an evolutionary approach*. (10th ed.). Sinauer Associates Inc, Massachusetts.

Mellor, D., Patterson-Kane, E., & Stafford, K.J. (2009). *The Sciences of Animal Welfare*.

Webster, J. (Ed.). (2011). *Management and Welfare of Farm Animals: The UFAW Farm Handbook*. (5th ed.). Wiley-Blackwell. (E-book also available).

Donaldson, J. (2013). *The Culture Clash*. (2nd ed.). Dogwise Publishing.

McConnell, P. (2002). *The Other End of the Leash*. Ballantine Books.

⁴ **Definitions of Journals**

Recommended Journal – candidates should have ready access to either print or electronic versions of the journal and have a sound knowledge of the published articles in the subject area.

Additional Journal – candidates should be able to access either printed or electronic versions of the journal and have a basic knowledge of the published articles in the subject area.

FURTHER INFORMATION

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