



AUSTRALIAN AND NEW ZEALAND COLLEGE OF VETERINARY SCIENTISTS

MEMBERSHIP GUIDELINES

Animal Welfare

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 and experience in animal welfare to be able to give sound advice to colleagues on problems and procedures commonly encountered in this field.

LEARNING OUTCOMES

This subject is described in the following learning outcomes and covers animal welfare of all species of animals which are defined in Australian, New Zealand and/or International laws, regulations and agreements. These may include domestic animals such as cattle, sheep, goats, pigs, poultry, horses and companion animals, laboratory, zoo and feral animals, wildlife, fish and cephalopods.

1. Introduction to Animal Welfare Science

1.1. The candidate will have a **sound**¹ knowledge of:

¹Knowledge levels:

Detailed knowledge — candidates must be able to demonstrate an in-depth knowledge of the topic including differing points of view and published literature. The highest level of knowledge.

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

- 1.1.1. Concepts of animal welfare
 - 1.1.1.1. Biological function
 - 1.1.1.2. Animal feelings
 - 1.1.1.3. Naturalness or *telos*
 - 1.1.1.4. The constituents of animal wellbeing, animal suffering, and animal distress
 - 1.1.1.5. Scientific approaches to animal welfare, their use in assessment and their limitations

1.2. The candidate will have a **basic** knowledge of:

- 1.2.1. History of human /animal interaction
- 1.2.2. Differences and similarities between animal rights and animal welfare concepts
- 1.2.3. Public understanding and appreciation of science and the scientific method in the evaluation and presentation of animal welfare issues

2. The Ethics of Animal Use

2.1. The candidate will have a **basic** knowledge of:

- 2.1.1. Philosophical concepts for assessing human use of animals
- 2.1.2. The THREE Rs (refinement, reduction and replacement)
- 2.1.3. Practical ethical frameworks for harm/benefit analyses [consequentialist and non-consequentialist approaches]

3. Physiological and Psychological Aspects of Adverse States.

3.1. The candidate will have a **sound** knowledge of:

- 3.1.1. Behaviour
 - 3.1.1.1. The use of behaviour in assessing animal welfare
 - 3.1.1.2. Abnormal behaviour related to housing and husbandry
 - 3.1.1.3. Motivation, self-awareness, self-consciousness and cognition in animals
- 3.1.2. Relationship between Health and Welfare
 - 3.1.2.1. Animal suffering and well-being as influenced by freedom from/prevention of disease
- 3.1.3. Stress and its scientific evaluation
- 3.1.4. Relationships between disease and welfare e.g. lameness in cattle, leg weakness in broilers, tail-biting in pigs

4. Animal Environments

4.1. The candidate will have a **basic** knowledge of:

- 4.1.1. The effects of environmental factors on welfare e.g. cage and pen design, stockmanship, stocking density, safety aspects, building design (humidity, noise etc), enrichment
- 4.1.2. Problems associated with social groupings or isolation

5. The Veterinary Profession's Role in Animal Welfare

5.1. The candidate will have a **basic** knowledge of:

- 5.1.1. Communication skills with other parties (including veterinarians, lawyers, government, pet owners, families, animal welfare organisations and ethics committees)
- 5.1.2. Leadership role in welfare for the profession

6. Veterinary Aspects of Animal Welfare

6.1. The candidate will have a **sound** knowledge of:

- 6.1.1. Intensive and extensive systems of animal management and the welfare challenges that can occur in each type of system
- 6.1.2. Pain recognition and assessment
- 6.1.3. Methods of euthanasia and their assessment for humaneness

6.2. The candidate will have a **basic** knowledge of:

- 6.2.1. Pharmacokinetics of pain relief
- 6.2.2. Assessment of routine procedures such as spaying, castration, tail docking, mulesing, disbudding, branding
- 6.2.3. Management of animals with hereditary problems including advice on breeding programmes
- 6.2.4. Potential welfare problems of reproductive technologies
- 6.2.5. Management of animal welfare during natural disasters or disease outbreaks

7. Legislation and Animal Welfare

7.1. The candidate will have a **sound** knowledge of:

- 7.1.1. Animal welfare legislation in Australia and New Zealand and its implementation
- 7.1.2. Animal welfare in quality assurance schemes

7.2. The candidate will have a **basic** knowledge of:

- 7.2.1. International, National and State Responsibilities
- 7.2.2. Government committee structure.

8. Human - Animal Relationships

8.1. The candidate will have a **sound** knowledge of:

- 8.1.1. Human - animal bond
- 8.1.2. Selection of animal attendants, animal technicians and stock persons
- 8.1.3. Use of animals in education and research
- 8.1.4. Stockmanship and productivity

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, autonomous 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 writing on the examination paper is permitted. In each paper you are provided with five (5) questions to answer, worth 20 marks each, giving a total of 100 marks per paper. There is no choice of questions. Questions may be long essay type or a series of shorter answer sub-questions. Marks allocated to each question and to each subsection of questions will be clearly indicated on the written paper.

Written Paper 1:

This paper is designed to test the candidate's knowledge of the principles of animal welfare as described in the Learning Outcomes. Where questions relate to general principles, answers may cite specific examples, but should primarily demonstrate an understanding of the underlying theoretical basis.

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Written Paper 2:

This paper is designed to (a) test the candidate's ability to apply the principles of animal welfare 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 animal welfare in Australia and New Zealand.

Oral Examination:

This examination requires the candidate to demonstrate achievement of the above mentioned Learning Outcomes. Discussion will be predominantly based on case material. The duration of this examination is approximately one (1) hour. A variety of multimedia is likely to be used during this examination. Five (5) cases are presented with supporting questions asked verbally in a face-to-face setting. The oral examination has a total of 100 marks with each case allocated 20 marks.

RECOMMENDED READING MATERIAL

The candidate is expected to research the depth and breadth of the knowledge of the discipline. This list is intended to guide the candidate to some core references and source material. The list is not comprehensive and is not intended as an indicator of the content of the examination.

Recommended Texts

- Appleby, M. C. and B. O. Hughes, Eds. (1997). *Animal Welfare*. Wallingford, UK, CAB International.
- Dawkins M S and Bonney R (2008) *The future of animal farming: Renewing the Ancient Contract* Wiley-Blackwell
- Flecknell, P and Waterman-Pearson, A (2000). *Pain management in animals*, WBSaunders.
- Fraser D *Understanding animal welfare: The science in its cultural context* (UFAW Animal Welfare)
- Broom, DM and Fraser, AF (2007) *Domestic animal behaviour and welfare*. London, Bailliere Tindall.
- Grandin, T (1993) *Livestock handling and transport*, (T.Grandin, ed), CAB International, Wallingford, UK.
- Gregory NG (2004) *Physiology and behaviour of animal suffering*. Blackwell Publishing.
- Gregory, N (1998) *Meat Science and Animal Welfare*, CABI Publishing.
- Hemsworth, PH and GJ Coleman, GJ (1998) *Human Livestock Interactions. The Stockperson and the Productivity and Welfare of Intensively Farmed Animals*. New York, Oxford University Press.
- Mellor D, Patterson-Kane E, Stafford K. (2009) *The Sciences of Animal Welfare* (UFAW Animal Welfare)
- Moberg, G. P. and J. A. Mench (2000). *The biology of animal stress*, CABI Publishing.
- Monamy, V (1996). *Animal Experimentation: A Student Guide to Balancing the Issues*. Adelaide, ANZCCART.
- Phillips, C.J.C. 2009. *The Welfare of Animals: The Silent Majority*. 220 pp. Springer, Dordrecht.
- Rollin B (2006) *An introduction to veterinary medical ethics: Theory and Cases* 2nd Edition Iowa State University Press
- Sandøe P and Christiansen SB (2008) *Ethics of animal use* John Wiley and Son

- Singer, P. (1993). Practical ethics. Cambridge University Press.

Useful texts

- Appleby MC, Mench JA, Hughes BO (2004). Poultry Behaviour and Welfare CABI Publishing
- Armstrong SJ. and RG. Botzler. The Animal Ethics Reader
- Ascione, Frank R. Ed. The International Handbook of Animal Abuse & Cruelty(2008) Purdue University Press
- Benson GH and Rollin BE. (2004) The well being of farm animals. Blackwell Publishing.
- Broom, DM. and KG. Johnson (1993). Stress and Animal Welfare. London, Chapman and Hall (Kluwer Academic Publishers).
- Dolan, K. (1999). Ethics, animals and science, Blackwell Science.
- Flecknell, P. (1996). Laboratory animal anaesthesia. London, Academic Press.
- Legood, G. (2000). Veterinary ethics, Continuum.
- MAF (2000). The Use of Animals in Research, Testing and Teaching. MAF Policy Information Paper No. 33. Wellington, Ministry of Agriculture and Forestry.
- McGreevy P. 2004. Equine Behaviour. Saunders.
- McMillan F.2005 .Mental Health & Well-Being in Animals: ed Franklin Blackwell
- Moss, R. (1992). Livestock Health and Welfare, Longman Scientific and Technical.
- OIE (2005) Animal Welfare: Global issues, trends & challenges Scientific and Technical Review
- Mellor D, Thornber P, Bayvel D, & Kahn S (2008) Scientific assessment & management of animal pain, OIE, Technical Series Volume 10
- Merk, M (2007) Veterinary Forensics: Animal Cruelty Investigations, Blackwell Publishing.
- Overall KL (1997) Clinical behavioral medicine for small animals. Mosby
- Phillips C (2002) Cattle Behaviour and welfare. Blackwell Publishing.
- Rachels, J. (1993) The elements of moral philosophy, McGraw-Hill.
- Regan, T. and P. Singer, Eds. (1976) Animal Rights and Human Obligations. New Jersey, Prentice-Hall.
- Rogers LJ (1997) Minds of their own- thinking and awareness in animals. Allen & Unwin

- Rollin B (2006) Introduction to Veterinary Medical Ethics: Theory and Cases. Blackwell Publishing
- Rollin B. (1998) The Unheeded Cry: Animal Consciousness, Animal Pain and Science, Iowa State University Press
- Serpell J (1996) In the company of animals: A Study of Human-Animal Relationships Cambridge University Press
- Singer, P (2001) Animal liberation. Ecco.
- Spedding, CWF. (2002) Animal Welfare. Earthscan.
- Waran, N. (ed) (2002) The Welfare of Horses. Kluwer Academic Publishers.
- Springer Animal Welfare series
 - The Welfare of Cats (ed. I. Rochlitz, 2005);
 - The Welfare of Laboratory Animals (ed. E. Kaliste, 2004);
 - The Welfare of Dogs (author K. Stafford, 2005);
 - The Welfare of Cattle (authors J. Rushen, A.M. de Passillé, M.A.G. von Keyserlingk and D.M. Weary, 2008);
 - The Welfare of Pigs (ed. J.M. Marchant, 2009);
 - The Welfare of Sheep (ed. C.M. Dwyer, 2009);
 - The Welfare of Animals: the Silent Majority (author C.J.C. Phillips, 2009)
 - The Welfare of Poultry and other Captive Birds (ed. I.J. Duncan and P. Hawkins, 2010);
 - Education in Animal Welfare (author, T. Eadie, 2011)
 - The Welfare of Farmed Flightless Birds (ed. P. Glatz, C. Lunam and I. Malecki, 2011).
- Webster, J. (1995). Animal Welfare, A Cool Eye Towards Eden, Blackwell Science.
- Webster, J (2005). Limping towards Eden, Blackwell Science.
- Young, RJ. (2003) Environmental Enrichment for Captive Animals. UFAW

Legislation

Australian State and Territory Animal Welfare Legislation and Codes of Practice

It is recommended that the candidate refer to the legislation and codes for their own particular state or territory.

The Australian Animal Welfare Strategy (<http://www.daff.gov.au/animal-plant-health/welfare/aaws>) [Accessed October 17, 2009]

New Zealand Animal Welfare Legislation

MAF. Guide to the Animal Welfare Act 1999. MAF Policy Information Paper No. 27, Ministry of Agriculture and Forestry, Wellington. 1999. ISBN 0 478 07551 0 ISSN 1171 4654 (<http://www.biosecurity.govt.nz/legislation/animal-welfare-act/guide/index.htm>) [Accessed October 17, 2009]

MAF Animal Welfare Website (<http://www.biosecurity.govt.nz/regs/animal-welfare>) [Accessed October 17, 2009]

Useful Journals

- Animal Welfare
- Animals
- Anthrozoos
- Applied Animal Behaviour Science
- Australian Veterinary Journal
- Australian Veterinary Practitioner
- Canadian Veterinary Journal
- Compendium for Continuing Education
- Journal of Applied Animal Welfare Science
- Journal of the American Veterinary Medical Association
- Journal of Veterinary Behavior: Clinical Applications and Research
- Journal of Veterinary Research
- Laboratory Animals
- New Zealand Veterinary Journal
- Veterinary Clinics of North America

Information Resource Centres

Animal Behaviour and Welfare Research Centre

(<http://www.waikato.ac.nz/wfass/subjects/psychology/research/dairy3/abwrc.shtml>) [Accessed October 17, 2009]

Animal Welfare Science Centre (<http://www.animalwelfare.net.au>) [Accessed October 26, 2009]

Centre for Animal Welfare and Ethics (www.uq.edu.au/cawe),

Pet Care Information & Advisory Service (PIAS)

(<http://www.petnet.com.au>) [Accessed October 26, 2009]

Anthrozoology.org (<http://www.anthrozoology.org>) [Accessed October 26, 2009]

ANZCCART (<http://www.adelaide.edu.au/ANZCCART/>) [Accessed October 17, 2009]

International Fund for Animal Welfare (IFAW) (<http://www.ifaw.org/splash.php>) [Accessed October 17, 2009]

BVA Animal Welfare Foundation (<http://www.bva-awf.org.uk/about/>) [Accessed October 17, 2009]

Universities Federation for Animal Welfare (UFAW) (<http://www.ufaw.org.uk/>) [Accessed October 17, 2009]

RSPCA Australia (<http://www.rspca.org.au/>) [Accessed October 17, 2009]

The Australian Veterinary Association

(<http://avacms.eseries.hengsystems.com.au//AM/Template.cfm?Section=Home&WebsiteKey=bbfd2ab3-e7fc-4456-bc66-bba966478417>) [Accessed October 17, 2009]

The New Zealand Veterinary Association

(http://www.nzva.org.nz/?_utma=64888616.546481246.1255849232.1255849232.1255849232.1&_utmb=64888616.1.10.1255849232&_utmc=64888616&_utmz=-)

Animal Welfare Membership Guidelines November 2011

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<http://www.vein.library.usyd.edu.au/links/Essays/index.html> [Accessed October 17, 2009]

American Veterinary Medical Association Animal Welfare
(http://www.avma.org/issues/animal_welfare/default.asp) [Accessed October 17, 2009]

Animal Welfare Science Essay (<http://vein.library.usyd.edu.au/links/Essays/index.html>) [Accessed October 17, 2009]

VEIN Animal Welfare, Alternatives and Ethics
(<http://vein.library.usyd.edu.au/links/animalwelfare.html>) [Accessed October 17, 2009]

www.animalbehaviour.net [Accessed October 17, 2009]

Canadian Council on Animal Care (<http://www.ccac.ca>) [Accessed October 17, 2009]

World Organisation for Animal Health (OIE)
(http://www.oie.int/Eng/bien_etre/en_introduction.htm) [Accessed October 26, 2009]

FURTHER INFORMATION

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