



Animal Welfare Science, Ethics, and Law Sub-Specialty

EXAMINATION BROCHURE

May 2023

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1. JURISDICTION

All Animal Welfare Science, Ethics and Law (AWSEL) sub-specialty examinations are within the jurisdiction of the AWSEL Examination Committee.

2. AIMS OF THE EXAMINATION

The aim of the AWSEL examination is for candidates to demonstrate that they have sufficient training, experience, and knowledge in animal welfare science, ethics, and law to meet the criteria for the diplomat status of the ECAWBM. Successful candidates will become certified EBVS European Veterinary Specialists® in Animal Welfare Science, Ethics, and Law (AWSEL).

3. SCOPE OF THE EXAMINATION

The candidates are required to demonstrate knowledge of the ECAWBM Animal Welfare syllabus in AWSEL as detailed in the residency requirements (Appendix I). The candidates will also be expected to have a detailed knowledge of relevant animal welfare literature, including but not limited to references in the reading list (Appendix II).

4. CONFIRMATION OF ELIGIBILITY FOR EXAMINATION

To be eligible to sit the examination, candidates must have had their credentials approved by the AWSEL Credentials committee. The examination fee is non-refundable.

Candidates must notify the Credentials committee of their intention to sit the examination and provide evidence of completing the expected activities no later than the 31st of December of the year prior to the intended examination. Candidates will be notified of their eligibility to sit the examination by the Credential Committee by March 1.

After being accepted to sit the examination, the candidate has a total of four (4) attempts to pass all parts of the examination within eight (8) years from their approval by the Credential committee. Candidates who fail to pass all parts of the examination after four (4) attempts will not be able to reapply to re-sit the examination and therefore cannot become a Diplomat of the ECAWBM.

5. STRUCTURE OF THE EXAMINATION

The examination consists of a written examination (3 components) and a practical examination (3 components). All the examinations are conducted in English.

The written examination will include the following components:

- A. Multiple choice questions paper
- B. Short essay paper
- C. Long essay paper

The oral/practical examination will include the following components:

- A. Practical welfare assessments of animals (one individual and one group assessment)

- B. Policy briefing and discussion
- C. Final discussion of candidate's case exposures, exam components, and reports

6. DETAILS OF THE WRITTEN EXAMINATION

6.1 Multiple-choice questions

This section aims to assess core knowledge regarding AWSEL. The format is a 75-minute examination consisting of 50 single-best-answer multiple-choice questions. There is no choice of questions. There is no negative marking.

6.2 Short-essay questions

This section aims to assess the broad knowledge base of AWSEL. The format is a 75-minute examination consisting of 10 open-ended questions. There is no choice of questions. Responses should be succinct (usually no more than 200 words per question). The answers be scored using standard marking criteria (*c.f.* section 8).

6.3 Long-essay questions

The focus of this section is to assess the application of knowledge in AWSEL using reasoned arguments. The format is a 3.5-hour examination consisting of three (3) open-ended questions from a possible choice of six (6) questions. The answers given by the candidates will be scored using standard marking criteria (*c.f.* section 8).

An example questions are available in Appendix III.

7. DETAILS OF THE PRACTICAL EXAMINATION

7.1 Welfare assessment

Candidates will be expected to present the findings of two welfare assessments to the Examination Committee: one assessment will focus on a group of animals (*e.g.*, chickens within a specific husbandry system) and one assessment will focus on an individual animal (*e.g.*, dog receiving veterinary treatment). To enable candidates to demonstrate their knowledge across a range of assessments, the two assessments will be from different animal uses (*i.e.* farm, companion, laboratory, zoo, wildlife, working animals) and species. The assessments are based on stimulus material (documents, pictures, and videos) provided by the examiners during the examination. All candidates sitting the examination on the same day will see the same stimulus material. They then have 20 minutes to work out their assessment individually, then 10 minutes to present their findings to the Examination Committee, followed by a 10-minute individual discussion with the examiners. Each of the following elements of the presentation will be assessed using the standard marking criteria (section 9).

Elements of the welfare assessment presentation	Proportion of assessment
Description of robust systematic welfare assessment	40%
Logical, critical analysis using appropriate frameworks	40%
External evidence to support analysis (<i>e.g.</i> literature, benchmarking, productivity)	20%

7.2 Policy briefing

A task description will include the intended recipient of the policy briefing (*e.g.* government department, retailer, or large producer), and the scope and context of the policy briefing (for example, a specific proposal to regulate the castration of pigs in

response to a media story). The specific task will be set no later than two months before the examination. Candidates will prepare a two-page evidence-based policy brief on the relevant welfare science, ethical analysis, and policy options (including legislation). The page count does not include the reference list. The candidate will submit their policy briefing document at least three days before the examination. The candidate will discuss the content of the policy briefing during the final oral examination (see 7.3). They will have 10 minutes to present their policy brief (using a PowerPoint file or other visual support is permitted), followed by a 20-minute discussion with the examiners.

Each of the following elements of the policy brief will be assessed using the standard marking criteria (section 9).

Elements of the policy brief	Proportion of assessment
Description of relevant welfare science, ethics, and policy, including legislation	40%
Logical, critical analysis using appropriate frameworks & recommendations	40%
External evidence to support analysis (<i>e.g.</i> peer-reviewed & reliable non-peer-reviewed literature)	10%
Format (clear, relevant visual material, appropriate reference format)	10%

7.3 Final oral examination

Candidates will be required to attend a final oral examination with the Examination Committee. The Committee will discuss the candidate's work experience including case exposures, publications, reports, and elements of the written and practical examinations. The oral examination will be under 30 minutes. Performance will be evaluated using marking criteria described in section 9 .

8. MARKING CRITERIA AND PROCESS

The pass mark for each component of the examination shall be 60%, as defined by the marking framework (Appendix IV).

- 8.1 Written examination: Each section will be marked by a two-step process. First, each section is marked independently by at least two (2) examiners members of the AWSEL Examination Committee. Second, quality control of the marking is conducted by another member of the AWSEL Examination Committee.
- 8.2 Practical examination: Each component of the practical examination will be assessed by at least two (2) examiners. An observer appointed by the Examinations Committee may be present. The role of the observer will be to adjudicate if there are differences in opinion between assessors.

9. OUTCOME OF THE EXAMINATION

- 9.1 All six elements of the examination will be regarded as entirely separate components for the assessment.
- 9.2 The pass mark for each component shall be 60% (*c.f.* Appendix IV).

- 9.3 Candidates must achieve a pass mark in all components of the examination to pass, regardless of their marks in any individual component
- 9.4 If a candidate fails one or more components of the examination, they will be able to re-sit these components in the next examination year according to EBVS procedures. Candidates are not required to re-sit components in which they have already scored 60% or above.
- 9.5 Candidates may apply to re-take any part of the examination up to a total of four (4) times and all parts of the examination must be passed within eight (8) years from being accepted to sit the examination
- 9.6 The examination team typically consists of at least three examiners from the ECAWBM (AWSEL) Examination Committee. Relevant notes and justifications for the marks attributed will be made available for each examination element at the candidate's request or in case of an appeal against an adverse decision.

10. SPECIAL REQUESTS

- 10.1 The ECAWBM is committed to allowing all candidates for examinations access to equitable assessment procedures. If a candidate believes that the circumstances, locations, or systems of the examination procedures (including written and practical) do not allow them to display their professional knowledge, skills, and behaviours fully; they are **strongly encouraged** to submit a request for variation of assessment procedures.
- 10.2 Requests for variation of assessment procedures should be made in the form of a draft plan which must:
- 10.2.1 Be directed to the Chair of the Examinations Board (Animal Welfare) and submitted with a candidate's notification of intention to sit the examinations.
- Be supported by a letter from the candidate's health professional (*e.g.*, Doctor, Ophthalmologist, Psychiatrist, Psychologist, Optometrist, Audiologist, or Occupational Therapist) outlining the measures requested to enable the candidate to undertake the examinations fairly. This letter needs to include specific areas where changes to standard practices are requested. Some examples may include:
 - Large print examination papers.
 - Adjusted lighting.
 - Extra reading time.
 - Use of a scribe or keyboard or other data entry device.
 - Extra toilet breaks or rest periods.
 - Wheelchair access.
 - Ergonomic furniture.
 - Measures to allow increased audibility.
- 10.3 A plan will be developed in consultation with the candidate. This plan will take into account:

- The contents of the professionals' letter of support.
- Costs, locations, and timeframes.
- Fairness to the other candidates in the examination system.

11. ORGANISATION OF THE EXAMINATION

- 11.1 The candidate will be sent written notification of the dates and venue of the examination
- 11.2 The candidate will be sent written notification of the dates and venue of the examination
- 11.3 Once notified of the names of the examiners, candidates must not contact these examiners on matters relating to the content of examinations, either before or after the examination. Any questions relating to the examination must be addressed to the Chair of the AWSEL Examination Committee or designated person.
- 11.4 Once notified of the names of the examiners, candidates must not contact these examiners on matters relating to the content of examinations, either before or after the examination. Any questions relating to the examination must be addressed to the Chair of the AWSEL Examination Committee or designated person.
- 11.5 Should a candidate contact an examiner about the examination after their announcement as an examiner, the Chair of the Examination committee may suspend the examination process for that candidate until satisfied that such contact was not an attempt to influence the conduct or outcome of the examination.
- 11.6 Candidates will be expected to make their travel and accommodation arrangements, and ensure that they are able to attend the examination on time.

12. MISCONDUCT

- 12.1 The highest standard of conduct is expected of candidates seeking Membership of the College. On their application for examinations, Candidates are required to read and sign an agreement to be bound by the College's rules, regulations, and guidelines.
- 12.2. Participating in any improper conduct such as cheating, attempting to cheat, or assisting others to cheat, or participating therein is a serious violation and will result in the College disqualifying the candidate's paper and other disciplinary action as deemed appropriate, including, but not limited to, forfeiture of examination fees and/or exclusion from the College. This applies before, during, and after the examinations.
- 12.3 Candidates must not give or receive assistance of any kind during the examination. During the examinations, candidates are expected to behave with integrity and follow all proper and reasonable instructions whether given in writing or by any College Officer including examination examiners and observers.
- 12.4 Examples of improper conduct include but are not limited to:
- Attempting to gain an unfair advantage by ascertaining the content of the examination before the examination period.

- Sharing information about the content of the examination during the period in which Candidates have been requested not to disclose it.
- Sharing or attempting to share answers with other Candidates during the examination.
- Attempting to obtain assistance during the examination with answering questions by any means including the use of notes, phones, the internet, or the AI.
- Using artificial intelligence to write any component of the examination, including the policy brief.
- Presenting false information in the application or any other documentation.
- Failing to follow the proper and reasonable instructions of College Officers.

12.5 The Examination Committee will investigate any irregularity or suspected violation of examination discipline, and a determination by the Examination Committee will be made regarding the matter.

13. REPORTING OF RESULTS

Results of the ECAWBM AWSEL examination will be reported to the Candidate within four (4) weeks by the College Board. Results will indicate whether the candidate passed or failed each of the components of the examination. Candidates may request a document indicating their performance on the various exam components.

The ECAWBM AWSEL board will store the manuscript of unsuccessful candidates for six (6) years after the candidate's last examination attempt. No copies of examination questions will be sent to the candidate.

APPENDIX I – SYLLABUS AWSEL

The residency program should include training in the following areas (the topics listed are intended to give the candidate a better understanding of the key aspects of AWSEL- the lists will be expanded with experience):

The following syllabus addresses the ‘core’ knowledge base in AWSEL. The candidate will be expected to show a deep level of understanding of the scientific and ethical principles that underpin both our current approach to animal welfare and any actions designed to improve it or actions that are known to reduce welfare. Equally, it will not be sufficient for a candidate simply to know the Law as it relates to animal welfare. they should also be equipped to undertake an analysis of the strengths and weaknesses of existing law, to be able to determine legal frameworks for determining infringement e.g. negligence, unnecessary and avoidable suffering, and investigate opportunities for improvements of welfare through existing or new legislation. Similarly, in Ethics, candidates should be able to apply ethical frameworks to help assess welfare problems and solutions.

1. Animal Welfare Science

1.1. The scientific basis of good husbandry

- practical recognition and assessment of animal wellbeing based on the principles of the ‘Five Domains’ and ‘Five Freedoms’ and their incorporation into assessment of the quality of life
- contemporary approaches to the scientific assessment of animal distress and positive and negative wellbeing based on an appropriate selection of assessment methods (toolbox concept for welfare indicators, e.g. resource, animal based and management factors), relevant scientific disciplines including ethology, physiology, pharmacology, anatomy, and neurobiology
- methods for assessing and enhancing animal environments and husbandry systems such as those used for the purposes of quality assurance and promoting a good quality of life for animals, including formalised systems such as Welfare Quality[®] protocols
- methods used for risk assessment of welfare e.g. EFSA reports
- methods used for labelling e.g. assurance schemes, methods of production
- analysis of the economics of conventional and ‘high and low welfare’ systems of husbandry
- principles for assessing stockmanship and education, training and competence of stockpersons.

1.2. The scientific basis of animal suffering and well-being

- genetic, environmental, and evolutionary determinants of behaviour in animals including vertebrates and invertebrates
- the nature of motivation and cognition in animals
- humane approaches to the manipulation of animal behaviour
- the nature of pain, distress, fear, and others adverse states e.g. frustration, boredom
- the assessment of positive wellbeing e.g. contentedness, pleasurable states

- the assessment of quality of a life
- the nature of consciousness and self-awareness, instinct, reproduction, and altruism

1.3 The impact of scientific procedures on animal welfare

- experimental procedures likely to cause 'pain, suffering, distress, and lasting harm', and their prospective and retrospective assessments
- commercial application of scientific procedures: e.g. embryo transfer, genetic modification, cloning.

1.4 Research methods: validation, experimental design, qualitative and quantitative analysis, and critical evaluation of data.

2. Ethics

2.1. The nature of scientific truth and moral value

- rational assessment of objectivity and subjectivity in science and ethics
- understanding evolving societal views about animal welfare, and the impact of human behaviour on animal welfare.

2.2. The philosophical issues and concepts involved in animal use

- key ethical approaches and frameworks, including deontology, utilitarianism, virtue ethics, the ethical matrix
- emerging ethical issues: e.g. patenting of animals, cloning, xenotransplantation, human-animal hybrids, stem cell research, minimum standards of welfare.

2.3 Ethics and human behavior concerning animals and animal use

- the construction and use of ethical frameworks to evaluate animal welfare and benefit;
- the historical, social, and cultural foundations of human perception and treatment of other (non-human) animals, concepts of dignity, autonomy, and integrity as applied to humans and animals
- morality and sentiment (empathy, sympathy) as bases for concern regarding animal welfare
- the ethical basis of professional conduct - the concepts of 'virtue' and etiquette, Veterinary Codes
- conflicts between human and animal interests (e.g. animals in sport, research, assistance animals, economics and economic constraints)
- potential conflicts between the interests of individual animals and human and animal populations, for example, environmental concerns, pest control, wildlife, and public health.

3. Law

The object of the law element of the Diploma is to enable candidates to demonstrate an advanced understanding of how legislation is developed, applied, and reviewed in practice, and case law. The object is to equip the candidate to

- play an informed role in public policy-making
- play an informed role in the policy-making within the veterinary profession
- participate in statutory inspections and other administrative enforcement mechanisms
- advise commercial and other non-statutory bodies.
- understand the role of an expert witness and be able to provide an expert opinion

In pursuing this syllabus, candidates would be expected to demonstrate familiarity with, and an ability to use effectively, relevant primary materials such as the Official Journal of the European Communities; Council of Europe Conventions, EU legislation; WOA, EFSA Journal, and other official publications.

Candidates will be required to demonstrate an understanding of

- The origin of legislation and the relationship between different types of rules:

WTO; Council of Europe Conventions; European Union Law, and the role of the courts in developing case law.

- The factors which influence the development of public policy and legislation:

Public opinion; pressure groups; scientific evidence; recommendations of advisory bodies such as EFSA and the role of Risk Assessment and Risk Management in Risk Analysis; the impact of international legislation and guidance arising from the WTO (GATT), WOA, the European Union, FAO, USDA, EFSA, MAF NZ, and Australia

- The policy-making process:

How EU institutions, national government departments, the devolved executives, local authorities, and other relevant public bodies make policy and administrative decisions.

- The legislative process:

EU legislation; national primary and secondary legislation; legislation passed by the devolved bodies; the impact of the WTO, WOA, FAO, and EU law.

- Enforcement through the courts:

WTO dispute resolution; European Court of Justice; judicial review; prosecutions

- Regulation of the veterinary profession:

Relevant European and domestic Law, Code of Professional Conduct; the maintenance of professional standards, the roles and responsibilities of the national veterinary regulatory bodies, and supranational bodies e.g. FVE, WOAH, WVA, EAEVE, EVBS

APPENDIX II – READING LIST AWSEL

The reading list below is non-exhaustive, and merely aims at guiding residents towards a crucial piece of work relevant to the AWSEL sub-specialty. Residents are expected to be up to date with current literature in AWSEL and to participate in journal clubs or similar ventures. Relevant animal welfare organisations can also provide current sources.

Candidates must realize the latitude of interests relevant to the AWSEL specialty and make themselves aware of issues in the public domain which may also provide a challenge in developing policy or other instruments that affect the welfare status of animals.

CORE READING LIST (last update: September 2018)

Animal welfare science

Appleby, M., Olsson, A. & Galindo, F. (eds) (2018) *Animal Welfare*, 2nd edition. Wallingford: CABI.

Blokhuis, H.J., Miele, M., Veisser, I. & Jones, B. (eds) (2013) *Improving farm animal welfare. Science and society working together: The Welfare Quality® approach*. Wageningen: Wageningen Academic Publishers.

Broom, D.M. (2014) *Sentience and Animal Welfare*. Wallingford: CABI. doi: [10.1079/9781780644035.0000](https://doi.org/10.1079/9781780644035.0000)

Dawkins, M.S. (2012) *Why Animals Matter: Animal consciousness, animal welfare, and human well-being*. Oxford: OUP.

Fraser, D. (2008) *Understanding Animal Welfare: The Science in its Cultural Context* (UFAW Animal Welfare Series). Chichester: Wiley-Blackwell.

Fraser, D., Weary, D. M., Pajor, E. A., & Milligan, B. N. (1997) 'A scientific conception of animal welfare that reflects ethical concerns'. *Animal Welfare* 6: 187-205. <https://animalstudiesrepository.org/cgi/viewcontent.cgi?article=1000&context=ethawel>

Mellor, D.J. (2016) 'Updating animal welfare thinking: moving beyond The Five Freedoms towards A Life Worth Living.' *Animals* 6(3): 21. doi: [10.3390/ani6030021](https://doi.org/10.3390/ani6030021)

Mendl, M., Burman, O., Parker, R. & Paul, E. (2009) 'Cognitive bias as an indicator of animal emotion and welfare: Emerging evidence and underlying mechanisms.' *Applied Animal Behaviour Science* 118 (3-4): 161-181. doi: [10.1016/j.applanim.2009.02.023](https://doi.org/10.1016/j.applanim.2009.02.023)

Veissier, I., Jensen, K., Botreau, R. & Sandøe, P. (2011) 'Highlighting ethical decisions underlying the scoring of animal welfare in the Welfare Quality® scheme.' *Animal Welfare* 20(1).

https://www.researchgate.net/publication/230851708_Highlighting_ethical_decisions_underlying_the_scoring_of_animal_welfare_in_the_Welfare_QualityR_scheme

Ethics

Armstrong, S.J. & Botzler, R. (eds) (2008) *The Animal Ethics Reader*, 2nd edition. Abingdon: Routledge.

Beauchamp, T.L. (2006) *The Human Use of Animals: case studies in ethical choice*, 2nd edition. New York: OUP.

Gruen, L. (2015) *Entangled Empathy: an alternative ethic for our relationship with animals*. New York: Lantern Books.

Mepham, B. (2008) *Bioethics: an introduction for the biosciences*, 2nd edition. Oxford: OUP.

Mullan, S. & Fawcett, A. (eds) (2017) *Veterinary Ethics: Navigating Tough Cases*. Sheffield: 5m Publishing.

Rollin, B.E. (2006) *An Introduction to Veterinary Medical Ethics: theory and cases*, 2nd edition. Oxford: Blackwell.

Singer, P. (ed) (2006) *In Defense of Animals: the second wave*. Oxford: Blackwell.

Law

European animal welfare regulations and directives: transport (EC/1/2005), on farm (98/58/EC, 99/74/EC, 2008/119/EC, 2008/120/EC, 2007/43/EC), research (2010/63/EU), and killing (EC/1099/ 2009)

OIE (2017) *Aquatic Code*, 20th edition.
<http://www.oie.int/standard-setting/aquatic-code/>

OIE (2017) *Terrestrial Animal Health Code*, 26th edition.
<http://www.oie.int/standard-setting/terrestrial-code/>

Robertson, I.A. (2015) *Animals, Welfare and the Law: fundamental principles for critical assessment*. Abingdon: Routledge.

Sweeney, N. (2017) *A Practical Approach to Animal Welfare Law*, 2nd edition. Sheffield: 5m Publishing.

Wagman, W.A. & Leibman, M. (2011) *A Worldview of Animal Law*. Durham, NC: Carolina Academic Press.

FURTHER READING

Animal welfare science

Bayne, K. & Turner, P.V. (2013) *Laboratory Animal Welfare*. Amsterdam: Elsevier.

Botreau, R., Veisser, I., Butterworth, A. & Keeling, L.J. (2007) 'Definition of criteria for overall assessment of animal welfare'. *Animal Welfare* 16(2): 225-228.

https://www.researchgate.net/publication/40105884_Definition_of_criteria_for_overall_assessment_of_animal_welfare

Broom, D.M. & Fraser, A.F. (2015) *Domestic Animal Behaviour and Welfare*, 5th edition. Wallingford: CABI.

Broom, D.M. (1988) 'The scientific assessment of animal welfare'. *Applied Animal Behaviour Science* 20(1-2): 5-19. doi: 10.1016/0168-1591(88)90122-0

Broom, D.M. (2010) 'Cognitive ability and awareness in domestic animals and decisions about obligations to animals'. *Applied Animal Behaviour Science* 126(1-2): 1-11. doi: 10.1016/j.applanim.2010.05.001

de Waal, F. (2016) *Are We Smart Enough To Know How Smart Animals Are?* New York: W.W. Norton & Co.

Fraser, D. (2006) Animal welfare assurance programs in food production: a framework for assessing the options. *Animal Welfare* 15(2): 93. <https://animalstudiesrepository.org/cgi/viewcontent.cgi?article=1001&context=farawel>

Grandin, T. (ed) (2015) *Improving Animal Welfare: A Practical Approach*, 2nd Edition. Wallingford: CABI.

Koolhaas, J.M. et al (2011) 'Stress revisited: a critical evaluation of the stress concept'. *Neuroscience and Biobehavioural Reviews* 35(5): 1291-1301. doi: 10.1016/j.neubiorev.2011.02.003

Paul, E.S., Harding, E.J. & Mendl, M. (2005) 'Measuring emotional processes in animals: the utility of a cognitive approach'. *Neuroscience and Biobehavioural Reviews* 29(3): 469-491. doi: 10.1016/j.neubiorev.2005.01.002

Scott, E.M., Nolan, A.M. & Fitzpatrick, J.L. (2010) 'Conceptual and methodological issues related to welfare assessment: a framework for measurement'. *Acta Agriculturae Scandinavica (Section A, Animal Science)* 51(30): 5-10. doi: 10.1080/090647001316922983

Smulders, F.J.M. & Algers, B. (2009) *Welfare of Production Animals: assessment and management of risks*. Wageningen: Wageningen Academic Publishers.

Stolba, A. & Wood-Gush, D. (1989) 'The behaviour of pigs in a semi-natural environment'. *Animal Science* 48(2): 419-425. doi: 10.1017/S0003356100040411

Waran, N. (ed) (2003) *The Welfare of Horses*. Dordrecht: Springer.

Ethics

Regan, T. (2004) *The Case for Animal Rights*, 2nd edition. Berkeley: University of California Press.

Sandøe, P. & Christiansen, S.B. (2008) *Ethics of Animal Use*. Chichester: Blackwell.

Sandøe, P., Corr, S. & Palmer, C. (2016) *Companion Animal Ethics*. Oxford: Wiley Blackwell.

Singer, P. (1995) *Animal Liberation*. London: Pimlico (Random House).

Law

Cao, C. & White, S. (eds) (2016) *Animal Law and Welfare – International Perspectives*. Heidelberg: Springer.

Lundmark, F., Berg, C. & Röcklinsberg, H. (2018) 'Private animal welfare standards - opportunities and risks'. *Animals* 8(1): pii: E4. doi: 10.3390/ani8010004

Munro, R. & Munro, H. (2008) *Animal Abuse and Unlawful Killing*. London: Saunders Ltd.

Radford, M. (2001) *Animal Welfare Law in Britain: regulation and responsibility*. Oxford: OUP.

APPENDIX III – SAMPLE EXAMINATION QUESTIONS AWSEL**Multiple Choice Questions** (single correct answer, no negative marking):

1. When one castrates a calf without providing analgesia or anesthesia, which principle of biomedical ethics is challenged?
 - A. Beneficence
 - B. Justice
 - C. Non-maleficence
 - D. Respect for autonomy

2. What approach may be more successful at reducing the incidence of tail biting in pigs?
 - A. Providing the pigs with more food.
 - B. Raising pigs together since weaning without mixing them.
 - C. Removal from the pen of the pig that bites the tail of their companions.
 - D. Providing the pigs with more opportunities to root, or providing them with straw

3. What are the Three Rs' principles, first enunciated by Russell and Burch in 1959?
 - A. Reduction, Reuse, Replacement.
 - B. Refinement, Replacement, Release.
 - C. Reduction, Replacement, Refinement.
 - D. Reduction, Refinement, Rehoming

4. What factor is often viewed as the main obstacle to the successful implementation of the CITES convention?
 - A. Lack of enforcement
 - B. Proof of illegality
 - C. The illegal trade of wildlife
 - D. The reluctance to impinge on economic gain

Short Essay Questions (no more than 150-200 words):

1. In An animal-based indicator to be included in a welfare assessment protocol needs to be valid, reliable, and feasible. Focusing on the validity, provide a description of this attribute, including different types of validity. Provide 1 or 2 examples to explain the importance to check that an indicator is valid before including it in a welfare assessment protocol. 1959, Russell and Burch published their 'Principles of Humane Experimental Technique'. What concepts, still in use today, were first described in their publication?

2. Define “quality of life” as it applies to animals.

Long Essay Questions:

1. Your local veterinary school asks you to host a debate on animal welfare and ethics for senior veterinary students. The topic question to be debated is: “Improvements in animal welfare are more likely to be achieved through attention to animal function rather than animal feelings”.

Outline the arguments in favour of (a) a focus on animal function and (b) a focus on animal feelings, concerning animal welfare. In doing this, name some authors students could refer to if they wish to explore these issues further. An animal-based indicator to be included in a welfare assessment protocol needs to be valid, reliable, and feasible. Focusing on the validity, provide a description of this attribute, including different types of validity. Provide 1 or 2 examples to explain the importance to check that an indicator is valid before including it in a welfare assessment protocol.

APPENDIX IV – MARKING FRAMEWORK

≥80 %	<p>Work would be worthy of dissemination under appropriate conditions.</p> <p>Mastery of advanced methods and techniques at a level beyond that explicitly taught.</p> <p>Ability to synthesise and employ in an original way ideas from across the subject.</p> <p>Excellent presentation.</p> <p>Outstanding command of critical analysis and judgment.</p>
70 - 79 %	<p>Excellent range and depth of attainment of intended learning outcomes.</p> <p>Mastery of a wide range of methods and techniques.</p> <p>Evidence of study and originality clearly beyond the bounds of what has been taught.</p> <p>Excellent presentation.</p> <p>Able to display a command of critical analysis and judgment.</p>
60 - 69 %	<p>Attained all the intended learning outcomes for a unit.</p> <p>Able to use well a range of methods and techniques to come to conclusions.</p> <p>Evidence of study, comprehension, and synthesis beyond the bounds of what has been explicitly taught.</p> <p>Good presentation of material.</p> <p>Able to employ critical analysis and judgement.</p>
50 - 59 %	<p>Some limitations in the attainment of learning objectives, but has managed to grasp most of them.</p> <p>Able to use most of the methods and techniques taught.</p> <p>Evidence of study and comprehension of what has been taught</p> <p>Adequate presentation of material.</p> <p>Some grasp of issues and concepts underlying the techniques and material taught.</p>
30 - 49 %	<p>Limited attainment of intended learning outcomes.</p> <p>Able to use a proportion of the basic methods and techniques taught.</p> <p>Evidence of study and comprehension of what has been taught, but grasp insecure.</p> <p>Poorly presented.</p> <p>Some grasp of the issues and concepts underlying the techniques and material taught, but weak and incomplete.</p>
1 - 29 %	<p>Attainment of nearly all the intended learning outcomes is deficient.</p> <p>Lack of ability to use all or the right methods and techniques taught.</p> <p>Inadequately and incoherently presented.</p> <p>Wholly deficient grasp of what has been taught.</p> <p>Lack of understanding of the issues and concepts underlying the techniques and material taught.</p>
0 %	<p>No significant assessable material, absent, or assessment missing a "must pass" component.</p>