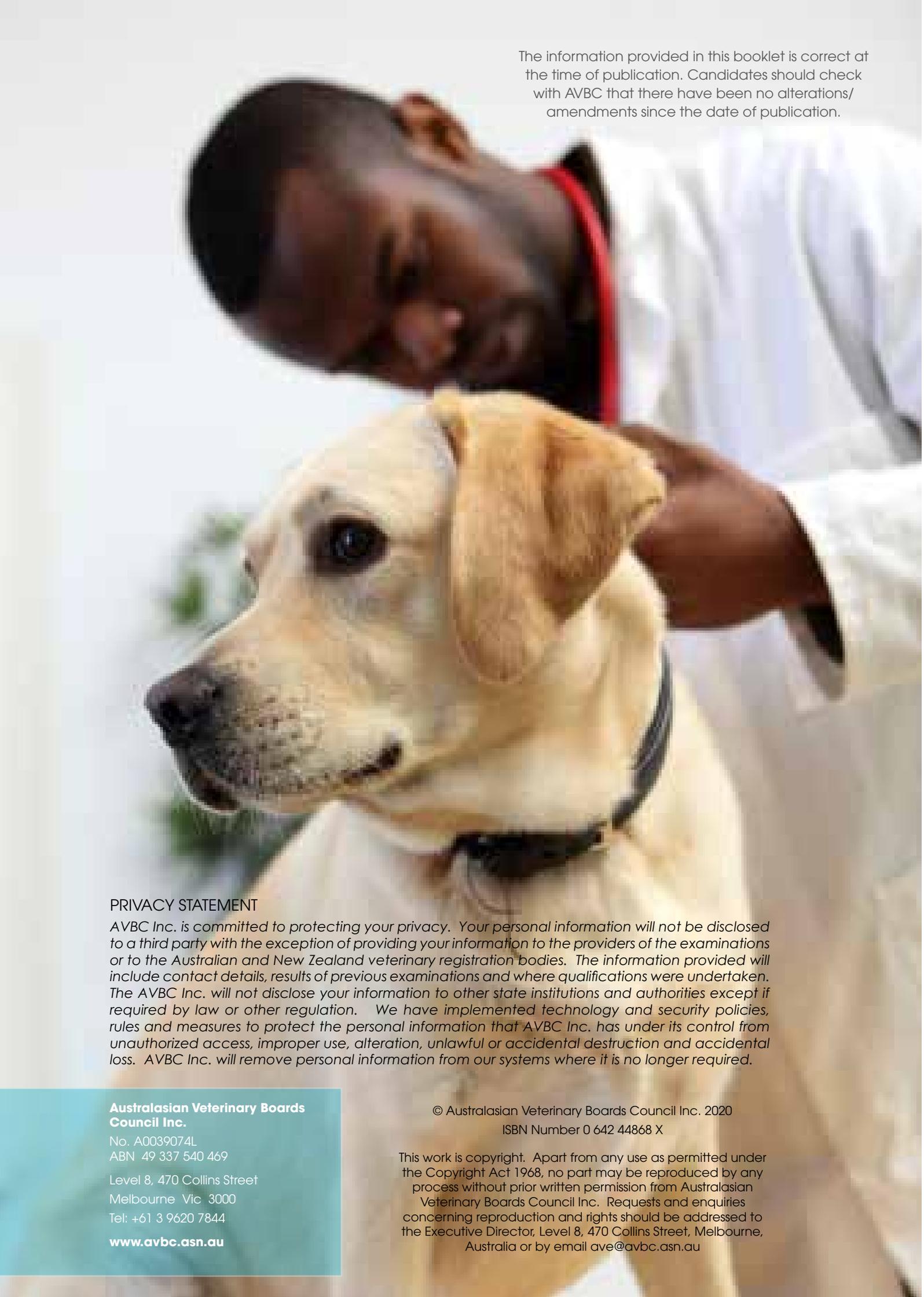


Australasian Veterinary Examination (AVE)

Information for AVE Candidates

December 2020



The information provided in this booklet is correct at the time of publication. Candidates should check with AVBC that there have been no alterations/ amendments since the date of publication.

PRIVACY STATEMENT

AVBC Inc. is committed to protecting your privacy. Your personal information will not be disclosed to a third party with the exception of providing your information to the providers of the examinations or to the Australian and New Zealand veterinary registration bodies. The information provided will include contact details, results of previous examinations and where qualifications were undertaken. The AVBC Inc. will not disclose your information to other state institutions and authorities except if required by law or other regulation. We have implemented technology and security policies, rules and measures to protect the personal information that AVBC Inc. has under its control from unauthorized access, improper use, alteration, unlawful or accidental destruction and accidental loss. AVBC Inc. will remove personal information from our systems where it is no longer required.

Australasian Veterinary Boards Council Inc.

No. A0039074L
ABN 49 337 540 469

Level 8, 470 Collins Street
Melbourne Vic 3000
Tel: +61 3 9620 7844

www.avbc.asn.au

© Australasian Veterinary Boards Council Inc. 2020
ISBN Number 0 642 44868 X

This work is copyright. Apart from any use as permitted under the Copyright Act 1968, no part may be reproduced by any process without prior written permission from Australasian Veterinary Boards Council Inc. Requests and enquiries concerning reproduction and rights should be addressed to the Executive Director, Level 8, 470 Collins Street, Melbourne, Australia or by email ave@avbc.asn.au

Contents

1. Introduction	2	7. Applying for the AVE	24
2. Overview of the AVE Process	2	8. Examination Fees	24
3. Eligibility for the AVE	4	9. Rules of Conduct for the AVE	25
3.1. Eligibility for the AVE	4	10. Special Consideration	25
3.2. English language proficiency tests	4	11. Appeals	25
4. Preliminary (MCQ) Examination	5	12. Resources	26
4.1. General information	5	12.1. Recommended References	26
4.2. Topics examined in the Preliminary (MCQ) Examination	5	12.2. Useful Websites	27
Table 2. Topic Guide	6-8	12.3. Library Facilities	29
4.3. Pass mark for the Preliminary (MCQ) Examination	5	12.4. Additional Resources	29
4.4. Preparing for the Preliminary (MCQ) Examination	9	12.4.1 Preventive Medicine	29
4.5. Re-sitting the Preliminary (MCQ) Examination	9	12.4.2 Practical Examinations	30
4.5.1 Applying to re-sit the MCQ and fees for re-sitting	9	12.5. Bridging Courses	30
5. Final (Clinical) Examination	10	12.6. Counselling Advice	30
5.1. General information	10		
5.2. Format of the Final (Clinical) Examination	11	Appendix 1: Essential Attributes and Competences of the Veterinarian in Australia and New Zealand	31
5.2.1 Oral (viva voce) examinations	11	Appendix 2a: Schools of Veterinary Science in Australasian Universities	33
5.2.1.1 Small Animal Practice	12	Appendix 2b: Australasian Veterinary Registration Boards	34
5.2.1.2 Production Animal Practice	13	Appendix 2c: Other useful addresses	35
5.2.1.3 Preventive Medicine	14	Appendix 3: Sample MCQs - AVE Preliminary Examination	36
5.2.2 Practical examinations	15	Appendix 4: Clinical Skills Check List	42
5.2.2.1 Equine Practice Examination	15	Appendix 5: Rules of Conduct for the AVE	43
5.2.2.2 Cattle and Sheep Clinical Skills	16		
5.2.2.3 Practical (Small Animal) Anaesthesia	17		
5.2.2.4 Practical (Small Animal) Surgery	18		
5.2.2.5 Pathology Practical Examination	19		
5.2.2.6 Physical Examination of a Dog and Cat	20		
5.3. Assessment Protocols - Oral and Practical Examinations	21		
5.3.1 Oral Examinations (Vivas)	21		
5.3.2 Practical Examinations	21		
5.3.3 Grading	22		
5.4. Pass Mark for the Final (Clinical) Examination	22		
5.5. Preparing for the Final (Clinical) Examination	22		
5.6. Re-sitting the Final (Clinical) Examination	22		
5.6.1 Preparing for re-sitting	23		
5.6.2 Applying and fees for re-sitting	23		
6. Examination results & certification	23		

1 Introduction

The Australasian Veterinary Examination (AVE) is designed to assess, for registration purposes, the veterinary knowledge and clinical competences of overseas qualified veterinarians whose veterinary qualifications are not recognised by State or Territory Registration Boards in Australia or the Veterinary Council of New Zealand.

The AVE is comprised of:

1. the **Preliminary (MCQ) Examination** which focuses on basic and applied veterinary knowledge across a wide range of topics; and
2. the **Final (Clinical) Examination** which assesses clinical competence in the main domains of veterinary practice.

The **Preliminary Examination** consists of two papers, set in English, in multiple choice question (**MCQ**) format. The exam is offered in Australia and overseas. The **Final (Clinical) Examination** involves a series of oral and practical examinations. It is conducted in English once per year over several

days, and is offered only in Australia. A pass score for the Preliminary (MCQ) Examination is required for admission to the Final (Clinical) Examination.

The AVE is based on the competences of the veterinary profession as benchmarked against Australasian graduates (see **Appendix 1**).

The AVE Committee (AVEC) ensures that the format and content of the AVE is consistent with undergraduate veterinary courses and the standard of examinations in Australasian veterinary schools, with an emphasis on the circumstances common in Australasia. Members of the Committee have broad expertise over the full range of disciplines covered in the AVE examinations.

AVEC is a Standing Committee of the Australasian Veterinary Boards Council (AVBC) with responsibility to develop and oversee the AVE.

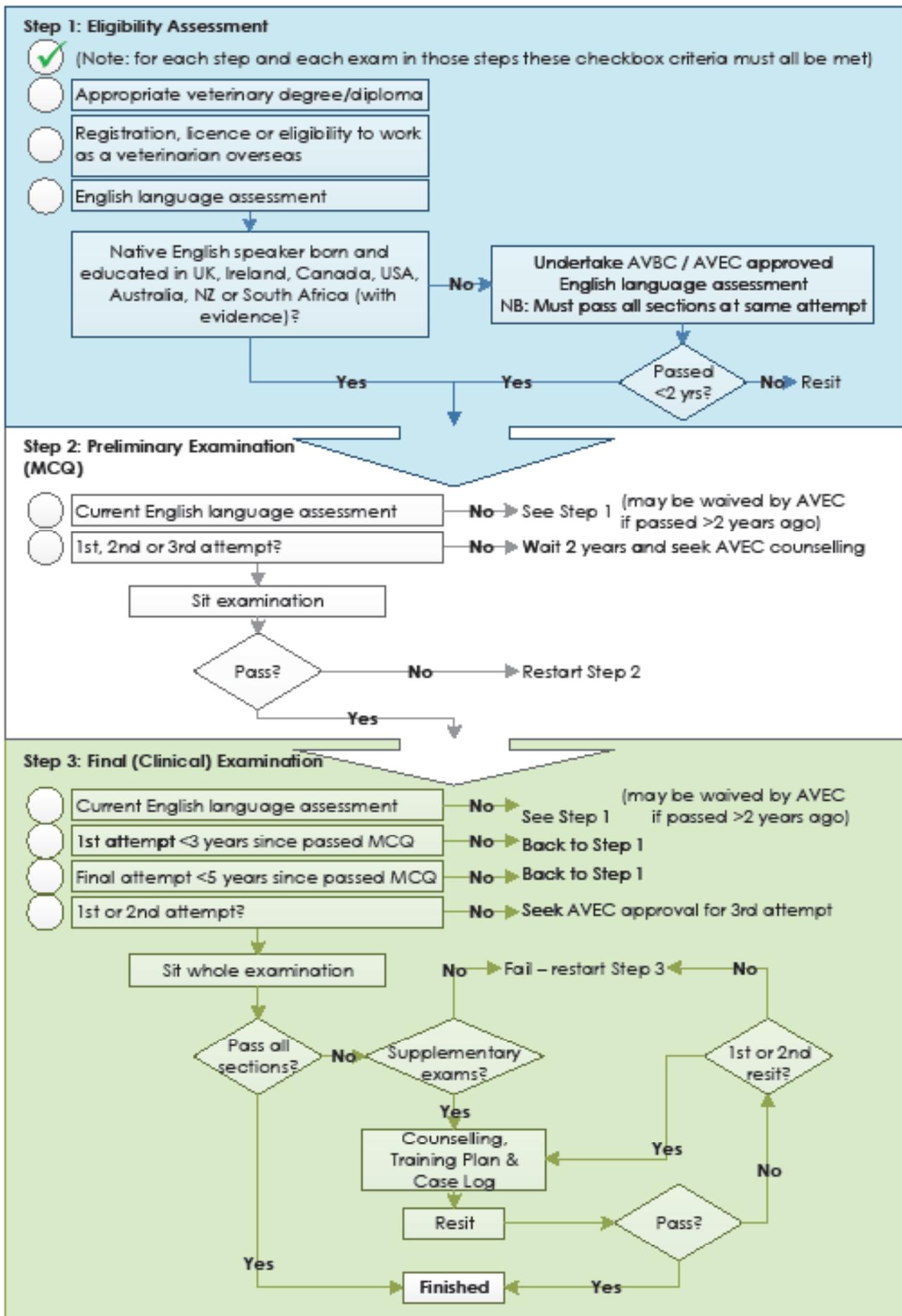
2 Overview of the AVE process

There are three components to the AVE:

1. **Eligibility Assessment** - carried out by AVBC to assess whether the applicant is eligible to sit the AVE (written and clinical components). This also includes an English language test -
- either the **Occupational English Test (OET)** OR the academic module of the **International English Language Testing System (IELTS)** OR the **Test of English as a Foreign Language (TOEFL-iBT)** OR the **Pearson Test of English Academic (PTE Academic)**, for applicants whose native language is not English;
2. **Preliminary (MCQ) Examination** - consisting of two papers, set in English, in multiple choice question (MCQ) format, held in Australia and overseas; and
3. **Final (Clinical) Examination** in clinical veterinary practice conducted in English once per year over several days, and only in Australia. The Preliminary (MCQ) Examination must be successfully completed before the Final (Clinical) Examination can be attempted.

The steps required to complete each component are summarised in the flowchart in Table 1.

TABLE 1 - FLOWCHART OF THE EXAMINATION PROCESS



3 Eligibility for the AVE

3.1. Eligibility for the AVE

Before enrolling candidates, the AVBC assesses their eligibility to sit the AVE. Candidates are eligible if they:

1. hold a degree or diploma awarded after at least four years of study at a veterinary school which appears on the directory of [AVMA ECFVG®-listed Veterinary Colleges of the World](#) (these acronyms refer to the American Veterinary Medical Association and the Educational Commission for Foreign Veterinary Graduates®) OR at a school which was part of a college or university listed in the “[World List of Universities](#)”; and
2. are registered, licensed or eligible to be recognised as a veterinarian of good standing in the country in which they studied or worked;
3. have confirmation of English language proficiency if their native language is not English by holding a pass in an English language test approved by the AVBC.

A candidate who has been assessed as eligible to sit the AVE does not have to undergo an assessment of their eligibility again, so long as they remain in contact with the AVE.

3.2 English language proficiency tests

Native speakers of English born and educated in the UK, Ireland, Canada, USA, Australia, New Zealand and South Africa are exempt from the English language assessment requirement. Candidates should provide supporting evidence with their application.

Applicants whose native language is **not** English must pass either the **Occupational English Test (OET)** OR the **academic module of the International English Testing System (IELTS academic)** OR the **Test of English as a Foreign Language (TOEFL-iBT)** OR the **Pearson Test of English Academic (PTE Academic)** before they can apply for an assessment of their eligibility to sit the AVE.

The **OET** is administered by Cambridge Boxhill Language Assessment, a venture between Cambridge Assessment English and Box Hill Institute. The test includes written, listening, reading and speaking sections and is held in Australia and overseas. A candidate must pass the **OET** with a B pass or higher, or a score of 350 or higher, in each section to satisfy the English language requirement before applying for the AVE.

The **International English Language Testing System (IELTS)** examination is an alternative English language test. It must be completed with a score of at least a 7 in each section of the **academic** (not the general) **module**.

The **Test of English as a Foreign Language (TOEFL-iBT)** examination is another alternative English language test. It must be completed with scores of at least 24 in Listening, 24 in Reading, 27 in Writing and 23 in Speaking.

The **Pearson Test of English Academic (PTE Academic)** is another English language proficiency test accepted by the AVBC. It must be completed with a score of at least 65 in each of the four communicative sections of the test.

Should a candidate fail to achieve the required standard in the English language proficiency test, they must re-sit an entire English language proficiency test. The AVE Committee does not permit re-sits of sub-sections of a test.

Information about applying for the **OET**, **IELTS (academic)**, **TOEFL-iBT** or **PTE Academic** can be obtained from the English languages test providers. See **Appendix 2** of this information booklet for their website addresses and contact details.

A pass in the **OET/IELTS/TOEFL-iBT/PTE Academic** test is valid for **two** years. A valid (ie current) test result is required at each stage of the AVE process. This may mean that during a candidate’s engagement with the AVE process, they may need to re-take an English language proficiency test.

In the case of a candidate continuously living and working **OR** living and studying in an approved English-speaking country, the requirement to re-test **may** be waived by the AVE Committee provided the candidate can provide sufficient evidence to establish that English skills have been maintained, and that the previous test satisfies current standards.

Preliminary (MCQ) Examination

4.1 General information

The Preliminary (MCQ) Examination is designed to test general knowledge of veterinary science and the application of that knowledge relevant to veterinary practice in Australasia. The examination consists of two papers:

- Paper 1: Base knowledge (general knowledge of veterinary science)
- Paper 2: Clinical reasoning (ability to apply specific knowledge, clinical judgement)

The topics covered in the two papers are listed in Table 2.

Sample questions can be found in **Appendix 3**. Sample questions are intended to give an indication of the format of the questions; they do not represent the degree of difficulty of any part of the examination.

The Preliminary (MCQ) Examination is administered via secure computer delivery. Candidates who enrol for the Preliminary Examination will be given access to a short practice test.

The Preliminary (MCQ) Examination is normally held on one day during April each year. It is administered at venues in a number of State capital cities and New Zealand. For those applicants who live overseas, venues may be organised in overseas countries from time to time.

The examination is conducted under strict supervision. Both papers must be completed on the same day. Paper 1 has 120 questions and Paper 2 has 100 questions. The time for completing each paper is three hours. There will be a scheduled break in between the two papers. Calculators and other mechanical or electronic devices are neither required nor permitted. Note paper may be provided.

The Preliminary (MCQ) Examination **must be undertaken within the validity period of the candidate's English language test** (OET, IELTS academic, TOEFL-iBT or PTE Academic), **that is, two years**. Validity can be renewed by either re-sitting a test to current standards or by re-validating a previous test (which satisfies current standards). See section 3.2.

4.2 Topics examined in the Preliminary (MCQ) Examination

See Table 2 on the following pages for a list of the topics examined in the Preliminary (MCQ) Examination.

4.3 Pass mark for the Preliminary (MCQ) Examination

The final score for the Preliminary (MCQ) Examination is the combined score of Paper 1 and Paper 2.

AVBC utilised the Rasch methodology to establish the pass score. This robust framework has been introduced worldwide for high stakes examinations, and yields precise measures of candidate performance. The measure of required ability is called the 'cut-score' and this is precisely determined for the AVBC MCQ exam, especially for borderline candidates. Rasch methodology provides exactly the same standard to pass the exam, irrespective of the cohort and the difficulty of the specific paper. The AVE Committee is confident that the scoring methodology is a fair and professional assessment of competence to pass the Preliminary (MCQ) Examination.

Results of the Preliminary (MCQ) Examination are sent in writing by email within eight weeks. No results are given by telephone.

Preliminary (MCQ) Examination

4.2 Topics examined in the Preliminary (MCQ) Examination

TABLE 2 TOPIC GUIDE - PRELIMINARY (MCQ) EXAMINATION

(Note: these are approximate figures only)

PAPER 1 - GENERAL KNOWLEDGE VETERINARY SCIENCE

TOPIC	SUB-TOPIC	Approx no. Q'ns in Paper
1. Anatomy	1. Anatomy	4
2. Physiology	1. Physiology 2. Pathophysiology	10
3. Husbandry & Welfare	1. Nutrition 2. Reproduction 3. Welfare 4. Animal Behaviour 5. Other	10
4. Pathology & Clinical Pathology	1. Other 2. Alimentary tract 3. Cardiovascular 4. Nervous 5. Musculoskeletal 6. Respiratory 7. Endocrine 8. Urinary 9. Reproductive - male & female 10. Miscellaneous 11. Skin and mammary 12. Lymphoreticular 13. Special sense 14. Hepatobiliary / pancreas 15. Haematology 16. Biochemistry 17. Cytology 18. Body fluids 19. Serology	15
5. Infectious Diseases	1. Bacterial 2. Viral 3. Protozoal 4. Parasitic 5. Fungal 6. Exotics 7. Other	15

Preliminary (MCQ) Examination

TOPIC	SUB-TOPIC	Approx no. Q'ns in Paper
6. Toxicology	<ol style="list-style-type: none"> 1. Naturally occurring toxins (plants, feed) 2. Envenomation 3. Pollutants / poisons 	6
7. Pharmacology / Therapeutics	<ol style="list-style-type: none"> 1. Antimicrobial 2. Prophylaxis (worm treatment, vaccination) 3. Anti-inflammatory / analgesic drugs 4. Drug interaction 5. Other 	10
8. Public Health	<ol style="list-style-type: none"> 1. Principles of Epidemiology 2. Zoonoses 3. Food Safety 	10
9. Professional Practice	<ol style="list-style-type: none"> 1. Therapeutic Regulations 2. Radiation Safety 3. Environment, Health and Safety (EHS) / Personal Protective Equipment (PPE) 4. Ethics 5. Euthanasia 6. Other Legal 	5
10. Surgical / Anaesthesia / Imaging Principles	<ol style="list-style-type: none"> 1. Principles of asepsis 2. Wound healing 3. Surgical technique 4. Anaesthesia - Monitoring 5. Anaesthesia - Effects 6. Pain assessment and management 7. Radiographic practice 8. Other imaging 	15

Total for Paper 1: 100 questions + 20 pilot questions (which are not scored)

Preliminary (MCQ) Examination

PAPER 2 - APPLICATION OF KNOWLEDGE, CRITICAL THINKING

SPECIES COVERED
1. Equine
2. Cats
3. Dogs
4. Cattle
5. Other Ruminants (sheep, goats, alpacas)
6. Pigs & Poultry
7. Pocket Pets & Birds
8. Other

CLINICAL PRESENTATIONS COVERED
1. Lameness
2. Red eye, blindness, sore eye
3. Lumpy, hairy, bald & itchy
4. Fistula, fistulae & abscesses
5. Diarrhoea
6. Abdominal pain distension
7. Vomiting / regurgitation
8. Dyskinesia, constipation and straining (tenesmus)
9. Jaundice/pallor, bleeding
10. Dyspnea, nasal discharge
11. Stridor / cough
12. PU/ PD (Polyuria/ Polydypsia)
13. Urinary incontinence, stranguria, haematuria
14. Nervous signs (seizures, tremors, ataxia, abnormal behaviour etc)
15. Syncope, collapse, weakness
16. Sudden death
17. Prolapse
18. Weight loss & dysphagia
19. Poor performance
20. Lethargy / anorexia
21. Pyrexia
22. Trauma
23. Dystocia, still birth, infertility, abortion
24. Neonates

Total for Paper 2: 80 questions
+ 20 pilot questions (which are not scored)

Preliminary (MCQ) Examination

4.4 Preparing for the Preliminary (MCQ) Examination

Sample MCQs can be found in **Appendix 3**. Please note that the sample MCQ questions in Appendix 3 are intended to provide candidates with examples of the type of questions and the format used in the MCQ. They do not reflect the degree of difficulty of questions in the exam papers.

Candidates who enrol for the Preliminary Examination will be given access to a short practice test to assist and familiarise them with the computer-based (online) exam delivery format. The practice questions do not provide a guide to the content of the questions in the exam.

A number of sources useful for practicing multiple choice questions representative of questions in the AVE are available:

- The Series: Mosby's Review Questions and Answers for Veterinary Boards (the Basic Sciences and Clinical Sciences books)
- Saunders Comprehensive Review for the NAVLE by Patrick Schenk ISBN-13: 978-1416029267 (also available in ebook format)
- NAVLE (North American Veterinary Licensing Examination) website for practice questions <http://nbvme.org/?id=80&page=Practice+Versions-NAVLE>
- PAVE® (Program for the Assessment of Veterinary Education Equivalence) website for practice questions <https://www.aavsb.org/licensure-assistance/international-pathway/take-qualifying-science-examination/>

Please note that the standard required to pass the AVE may be difficult to achieve by candidates who:

- qualified a number of years ago, perhaps have worked in a narrow area and who have not undertaken substantial revision of the basic subject matter of the examination;
- obtained a basic qualification which does not adequately cover all the subjects covered by the AVE and who have not undertaken further study to remedy these shortcomings;
- have failed to familiarise themselves with the relevant legislation or with the husbandry, diseases and conditions of animal species to be commonly found in Australasia; or
- have entered the examination without sufficient fluency in the English language.

Specifically, with regards to the Preliminary (MCQ) Examination, recent results indicate that some candidates need to take greater care in preparing for the MCQ examination by studying more broadly and in greater depth. Many of the questions test clinical judgement or the ability to use specific knowledge. Therefore, candidates are advised to carefully read and analyse each question before providing their answer.

4.5 Re-sitting the Preliminary (MCQ) Examination

If a candidate fails the Preliminary (MCQ) Examination, they must **re-sit both papers** at their next attempt.

Re-sitting the Preliminary (MCQ) Examination must be within the validity period of the English language test. Validity can be renewed by either re-sitting a test to current standards or by re-validating a previous test (which satisfies current standards).

There is a limit on the number of attempts that can be made at the Preliminary (MCQ) Examination. If a candidate fails the Examination three times, the candidate will be required to wait for two years before being permitted to re-sit. The candidate will also be required to seek counselling from a member of the AVE Committee.

Please see the flowchart in Table 1 on page 3.

4.5.1 Applying to re-sit the MCQ and fees for re-sitting

A separate application to sit the examination must be completed and another examination fee paid. Details can be obtained by contacting the AVBC Office and the AVE Coordinator.

Final (Clinical) Examination

5.1 General information

The Final (Clinical) Examination **can only be undertaken after successfully passing the Preliminary (MCQ) Examination. A candidate's English language test result must be valid when sitting the Final (Clinical) Examination.** Validity can be renewed either by re-sitting a test to current standards, or by re-validating a previous test (which satisfies current standards). See section 3.2.

Candidates must attempt the Final (Clinical) Examination within 3 years of passing the Preliminary (MCQ) Examination.

The examination tests knowledge and understanding of disease and animal management under Australasian conditions at a level that will allow you to practice effectively in Australasia. This entails demonstrating ability to make appropriate decisions about diagnostic steps, treatment regimens and control plans on the spot, using histories and case information provided by the examiner. Candidates will be expected to explain and justify decisions on diagnosis and treatment plans. The examination also includes assessment of practical skills including animal handling and basic surgical procedures.

While knowledge of specific information is expected, this examination tests the ability to work through problems as would be expected of you in clinical veterinary practice. Competence in clinical deduction and problem-solving, and basic clinical procedures is critical to allow adequate performance in this exam.

Candidates will **not** be expected to know the fine details of local legislation, uncommon drugs, or local names for plants, bacteria or parasites.

The Final (Clinical) Examination is set at a level based on the competence standards of the veterinary profession as benchmarked against Australasian graduates (see **Appendix 1**).

Table 3 provides candidates with a list of the areas of clinical veterinary practice covered in the Final (Clinical) Examination.

TABLE 3 The Final (Clinical) Examination covers the following areas of clinical veterinary practice:

Husbandry and management systems used in the care of Australasian companion and production animals;
Handling and restraint of animals of all domestic species;
Disease investigation, management and treatment in individual animals, and in herds and flocks of animals;
Common Australasian intoxications and envenomations;
Clinical pharmacology and application of therapeutics used for common diseases and relevant legislation and regulations;
Disease control and preventive medicine generally;
Animal welfare relevant to veterinary practice;
Legislation and regulations underpinning the delivery of veterinary services to the public;
Oral communication, writing reports and certificates;
Knowledge of the Occupational Health & Safety (OH&S) responsibilities of the veterinarian.

Final (Clinical) Examination

The Final (Clinical) Examination is held at an Australasian veterinary school (usually at the University of Queensland Gatton campus). The examination takes 5 days to complete.

It is the candidate's responsibility to arrange and meet all costs for accommodation and travel, including visas if travelling from overseas.

Candidates must bring the following with them to the venue:

- Photo identification (passport, driver's licence or similar)
- Clean protective clothing (coveralls/overalls/lab coat) and gumboots or other sturdy footwear for the practical animal handling/examination sessions
- Stethoscope
- Thermometer
- Clean protective clothing (lab coat, surgical scrubs) and **closed shoes** for the Practical Anaesthesia and Surgery sessions
- Short-cut clean finger nails
- A pen for writing in the Pathology examination

For some sections of the examination, live animals of various species will be used. All animals must be treated in a humane manner as expected by a veterinary practitioner.

Q-fever - Candidates are strongly advised to consult with their medical practitioner about Q-fever vaccination prior to the Final (Clinical) Examination. For those candidates who choose not to be vaccinated, and who have not been previously exposed to Q-fever, we advise wearing protective gear including face mask and gloves during all practical examinations. Protective gear will be available.

5.2 Format of the Final (Clinical) Examination

There are nine sections to the examination consisting of Oral (viva voce) and Practical examinations as shown in Table 4. Each section takes between 45 minutes and two hours, depending on the section. There will usually be two examiners present for each section. There may also be an observer from AVBC present.

TABLE 4 Format of the Final (Clinical) Examination

Oral (viva)	Practical
1. Small Animal Practice	1. Equine Practice
2. Production Animal Practice	2. Cattle and Sheep Clinical Skills
3. Preventive Medicine	3. Practical Anaesthesia (dog)
	4. Practical Surgery (dog)
	5. Pathology Practical
	6. Physical Examination of a Dog and Cat

5.2.1 Oral (viva voce) examinations

The format for the oral examination will be the same for the three oral examinations. Each candidate will be presented with a number of clinical scenarios to work through:

- Small Animal Practice Oral examination includes 5 clinical scenarios
- Production Animal Practice Oral examination includes 5 clinical scenarios
- Preventive Medicine Oral examination includes 4 scenarios

Final (Clinical) Examination - Oral (viva voce) examinations

5.2.1.1 Small Animal Practice

The aim of the examination is to assess whether a candidate has sufficient knowledge, can demonstrate adequate clinical reasoning and good judgement, and proficiency in relevant competencies (listed below) to a standard required to perform satisfactorily in small animal clinical practice.

This examination includes common clinical presentations in dogs, cats, caged birds and other pets presented in small animal practice. Candidates will be assessed on their understanding, and their ability to integrate and apply knowledge of common presentations, diagnostic methods including imaging and clinical pathology results to arrive at differential diagnoses. Candidates will be expected to be able to justify decisions on treatment plans and to discuss treatment outcomes.

This will be a 55 minute exam and there will be two Examiners.

Case scenarios chosen may be of the following settings and include the following disciplines:

Case scenario settings:

- Individual animal non-emergency presentations;
- Emergency presentation;
- Individual or group animal health management.

Disciplines examined:

- Internal medicine;
- Surgery;
- Diagnostic imaging;
- Clinical pathology;
- Anaesthesia/sedation/analgesia;
- Reproduction;
- Emergency medicine;
- Behaviour;
- Dentistry;
- Dermatology.

Competencies assessed in the Small Animal Practice Oral Examination may include all or some of the following:

Obtaining a relevant clinical history;

Interpreting physical examination findings;

Differentiating when emergency assessment (triage) is needed, as opposed to more extensive initial assessment;

Implementing first aid principles, including fluid therapy and resuscitation;

Determining when further investigation is required in an animal that presents;

Developing a treatment plan for a common medical problem and provide a prognosis;

Recommending appropriate nutrition and prophylaxis (including vaccination, anthelmintic, ectoparasite control) for all life-stages, in all species to be examined;

Forming an appropriate differential diagnosis list for common presentations in small animal practice;

Planning appropriate diagnostic work-up for common presentations in small animal practice;

Interpreting radiographs and ultrasound images of common presentations in small animal practice;

Determining appropriate and safe sedation or anaesthetic protocols for all species in small animal practice;

Interpreting clinical pathology (serology, haematology, biochemistry, urinalysis) and basic cytological samples;

Planning and understanding indications for surgical procedures of common presentations in small animal practice;

Providing appropriate analgesia when indicated for small animals;

Understanding principles and applications of anti-microbial stewardship in small animal practice;

Appropriately prescribing medical and nutritional treatment of common presentations in small animal practice;

Recognising when referral to a veterinary specialist is indicated;

Recognising when euthanasia should be considered and describing the process of safe and effective euthanasia.

Final (Clinical) Examination - Oral (viva voce) examinations

5.2.1.2 Production Animal Practice

The aim of the examination is to assess whether a candidate has sufficient knowledge, can demonstrate adequate clinical reasoning and good judgement, and proficiency in relevant competencies (listed below) to a standard required to perform satisfactorily in the field of Production Animal Practice.

This examination covers individual and herd/flock **medicine, surgery, reproduction and obstetrics** in cattle, small ruminants, pigs and poultry. Candidates will be assessed on their ability to investigate and manage disease and health of both herd/flock/pen/group and individual animals. Candidates will be presented with five scenarios of which at least one will involve pigs and/or poultry; 2 scenarios will involve intensive animal production; and 2 scenarios will involve extensive animal production.

This will be a 55 minute exam and there will be two Examiners.

Case scenarios may be of the following settings and include the following problems and presentations:

Scenario settings:

- Individual animal medical/surgical/obstetrical/reproductive problem(s);
- Herd/flock/pen/unit infectious disease problem;
- Herd/flock/pen/unit production problem.

Problems/Presentations:

- **Ill-thrift;**
Common causes of sub-optimal growth (ill-thrift) and productivity in young stock, and adults
- **Sudden death;**
Common causes of sudden death in pre-weaned and weaned young stock, and adults
- **Reproduction failure;**
Common causes of sub-optimal reproductive performance. This will include use of artificial breeding as a tool to improve management of reproduction
- **Disease and outbreak;**
Common endemic infectious and non-infectious diseases;
Clinical signs of high risk exotic diseases
- **Individual animal production problems and welfare;**
Common causes of pain and reduced animal welfare (eg lameness)

Competencies assessed in the Production Animal Oral Examination may include all or some of the following:

Demonstrating a working knowledge of both extensive and intensive production animal husbandry and health;

Detecting and interpreting abnormalities in individual production animals;

Detecting and interpreting abnormalities in a herd, flock or management group of production animals;

Investigating an individual or herd/flock/management group problem and establishing a logical clinical diagnosis;

Developing a practical and effective management, treatment and control plan for an individual animal, or for a herd/flock/management group of animals, and providing a rational prognosis;

Understanding and application of biosecurity measures to prevent/reduce the risk of introduction of infectious disease;

Recognising the possibility of an uncommon endemic disease, exotic disease or public health risk;

Recognising cases of sub-optimal animal welfare and making appropriate recommendations on how to improve welfare of affected animals;

Interpreting information relating to breeding performance of a herd/management group of breeding animals;

Investigating and assessing a case of dystocia and make practical recommendations on how to manage the case, including the use of obstetrical instruments;

Performing sedation, anaesthesia and providing appropriate pain relief;

Use of common surgical procedures in the treatment of production animals;

Recognising when euthanasia should be considered and describing the process of safe and humane euthanasia;

Demonstrating a working knowledge and understanding of the use and regulation of veterinary drugs.

Final (Clinical) Examination - Oral (viva voce) examinations

5.2.1.3 Preventive Medicine

The aim of this examination is to assess whether a candidate is able to make decisions for solutions to disease control and prevention. This includes decision making around exotic and endemic diseases and demonstration of understanding of the aspects to be considered, including animal welfare, legislation, professional practice and laboratory results.

Candidates will be presented with scenarios that may include:

- Exotic and endemic diseases of interest to industry/government;
- Situations where exotic/emergency diseases are suspected;
- Disease outbreak investigation;
- Prescribing principles and legislated requirements for pharmaceutical use;
- Topical animal welfare issues and professional and legislated obligations.

This will be a 45-minute examination and there will be two Examiners.

Candidates are expected to know key information about important diseases (common diseases and diseases of high impact) and to demonstrate they are able to find relevant information. Candidates are not expected to recall comprehensive lists of diseases and other specifics such as local legislative details, and withholding periods of compounds. They are expected to make informed decisions on disease response, control and prevention

that is based on integrating knowledge and sourced information. Candidates need to be ready to demonstrate how to use the information they have learned, not just recite it. They are expected to demonstrate proficiency in relevant competencies as listed below.

Candidates are expected to know and understand the following areas relevant for preventive medicine:

- Drugs and chemicals which are prohibited in food producing animals in Australia eg phenylbutazone in cattle, insecticide DDT etc.
- To develop and interpret a two-by-two table on the accuracy of a test (specificity and sensitivity)
- To describe the components and role of Animal Ethics Committees and to demonstrate understanding of the "Five Freedoms" of animal welfare and the "3R's" of animal welfare (replacement, reduction, refinement)
- Disease traceback - National Livestock Identification System (NLIS) and National Vendor Declarations (NVDs) etc
- Australian Animal Health Laboratory (AAHL) - role etc

Animal Health Australia has made available to AVE candidates its training program "Accreditation Program for Australian Veterinarians" (APAV) which will help to provide candidates with an awareness of national regulations, policies and issues in the main area of animal health in Australia, New Zealand candidates should be aware of this material. (See 12.4.1 for directions about how to access the APAV training program and other suggested reference sites.)

Competencies assessed in the Preventive Medicine Oral Examination may include all or some of the following:

Applying knowledge and understanding of the principles of disease prevention, control and eradication within animal populations, herds/flocks or management groups;

Applying knowledge and understanding of the necessary steps to be taken, by a veterinarian, on suspicion of an exotic disease in cattle, sheep, horses, pigs or poultry in the context of: (i) Foot and Mouth Disease, (ii) African Horse Sickness, (iii) Swine Fever, (iv) Newcastle Disease, (v) Avian Influenza, (vi) Equine Influenza, (vi) Rabies, (vii) African Swine Fever, (viii) Tuberculosis, (ix) Bluetongue, (x) Bovine Spongiform Encephalopathy. Note that candidates are advised that other exotic diseases of importance to Australia or New Zealand may be covered;

Applying knowledge and understanding of the necessary steps to be taken, by a veterinarian, to control: (i) Anthrax, (ii) Johne's Disease, (iii) Sheep Footrot, (iv) Strangles, (v) Hendra virus, (vi) Leptospirosis. Note that candidates are advised that other endemic diseases of importance to Australia or New Zealand may be covered;

Applying knowledge and understanding of diagnostic test characteristics to calculate and explain sensitivity and specificity when given a simple two-by-two table;

Applying knowledge and understanding of the legislation and codes of practice that apply to the veterinary profession in Australia and New Zealand;

Applying knowledge and understanding of veterinary drugs and agricultural chemicals in Australia and New Zealand, particularly the regulatory requirements in relation to Schedule 4 and Schedule 8 drugs, reporting adverse drug reactions to the Australian Pesticides and Veterinary Medicines Authority or the New Zealand Ministry for Primary Industries, and the application of drug and chemical withholding periods;

Applying knowledge and understanding of the legal requirements for undertaking experiments in animals in Australia and New Zealand;

Demonstrate understanding of the legal obligations/restraints imposed on veterinarians by animal welfare legislation.

Final (Clinical) Examination - Practical examinations

5.2.2 Practical examinations

5.2.2.1 Equine Practice Examination

There will be an oral component to this practical examination. The aim of the oral component is to assess whether a candidate has sufficient knowledge, can demonstrate adequate clinical reasoning and good judgement, and can demonstrate competence in practical clinical skills to a standard required to perform satisfactorily in the area of Equine Practice.

Candidates will be presented with two to four clinical scenarios. They are expected to be able to describe clinical abnormalities, outline their approach to investigation of the problem, provide differential diagnoses and a management plan for the problem set in each scenario. In the process of working through the case scenario, the practical competence of the candidate will be assessed. They have to be able to complete a basic physical examination and perform or describe clinical practical procedures as listed below.

Case scenario settings will primarily focus on individual animal emergency and non-emergency problems/procedures and may include:

- Wounds;
- Gastrointestinal abnormalities including colic;
- Lameness;
- Respiratory abnormalities;
- Common problems in foals.

Disciplines examined include:

- Medicine
- Surgery
- Reproduction
- Sedation, anaesthesia, pain relief
- Imaging and radiation safety
- Biosecurity

This will be a 55 minute examination and there will be two Examiners.

The Equine Practice Examination assesses competency in all or some of the following activities and procedures:

Humanely and appropriately catch and restrain a horse using a halter or bridle;

Describing the horse in terms of markings, gender, colour and breed with an approximate estimate of age;

Safely conducting a thorough clinical examination of a horse. This will include obtaining TPR (temperature, pulse, respiration), auscultation of lungs and abdomen;

Discussing how disease may affect clinical findings;

Examining a horse's mouth and assessing the condition of the teeth with a mouth gag;

Examining the eye with, or without, an ophthalmoscope;

Describing how and where to perform an abdominocentesis;

Describing the procedure and discussing the indications for performing a rectal examination and describing the structures that may be palpated;

Describing the procedure of passing a nasogastric tube including method of differentiating if tube is in the oesophagus or trachea;

Indicating suitable sites for giving an intramuscular injection to a horse;

Describing how to take a blood sample for haematological analysis and interpret results;

Picking up a horse's fore or hind limb and examine the hoof;

Effectively using the hoof testers;

Identifying location of various joints;

Examining by palpation the major soft tissue structures of the distal limb;

Positioning a horse for radiographic examination of the distal limbs;

Identifying the sites for applying local anaesthetic to block: regional nerves to the distal extremity, motor nerves to the eye, sensory nerves to the eye;

Recommending a protocol for sedation and/or general anaesthesia by considering animal temperament and health status, and procedure to be performed.

Final (Clinical) Examination - Practical examinations

5.2.2.2 Cattle and Sheep Clinical Skills

The aim of this examination is to assess whether a candidate is competent in practical, clinical skills commonly used in cattle and sheep practice.

This will be a 55-minute examination (35 minutes cattle, 20 minutes sheep) and there will be two Examiners.

The CATTLE Practical Examination assesses competency in the following procedures:

Pregnancy testing per rectum of 3 cows –
(non-pregnant, pregnant < 4 months and pregnant > 4 months);

Putting a halter on a cow in an appropriate way;

Safely examining the oral cavity;

Safely and correctly passing a stomach tube;

Restraining a cow and injecting a solution into the jugular vein;

Collecting a blood sample from the tail vein;

Administering an epidural anaesthetic;

Please note that the Examiner may include one or more of the following tasks:

Aseptically collecting a milk sample;

Lifting and restraining a cow's front or back leg;

Collecting a urine sample from a cow via a urinary catheter;

Collecting a sample of rumen fluid by rumenocentesis;

Thoroughly examining a cow's foot.

The SHEEP Practical Examination assesses competency in all or some of the following clinical procedures:

Conducting a distance examination of a pen of sheep and reporting the findings;

Catching and restraining a sheep and carrying out a clinical examination;

Taking the temperature per rectum;

Demonstrating collection of a jugular blood sample;

Examining mouth and teeth;

Examining feet and using a searcher knife to check for footrot;

Taking a faecal sample for culture;

Conducting an examination of a scrotum and scrotal contents of a ram and discussing the findings.

Final (Clinical) Examination - Practical examinations

5.2.2.3 Practical (Small Animal) Anaesthesia

This aim of this examination is to assess whether a candidate is competent to a standard required for satisfactorily performing in small animal practice, to administer anaesthesia and analgesia in a dog undergoing an elective surgical procedure.

This examination includes preparation for general anaesthesia, setting up the anaesthetic equipment, sedating the small animal, inducing anaesthesia and preparing the animal for surgery. The procedural steps and components of anaesthesia assessed are listed below.

This is a 75-minute examination of which 15 minutes is allowed for calculating drug doses, and 60 minutes for administering anaesthesia and setting up the patient. There will be one Examiner and one veterinary nurse/technician for assisting, and usually one experienced Observer.

The Practical Anaesthesia Examination assesses competency in the following procedures and activities:

Completing a pre-anaesthesia physical examination on a dog;

Selecting appropriate drugs and doses for premedication, induction and maintenance of anaesthesia and analgesia (including pre- and intra-operative analgesia);

Determining correct volumes of all drugs to be administered and preparing them for injection;

Determining appropriate flow rates for intra-operative fluid administration;

Preparing all equipment needed including the anaesthetic machine;

Aseptically placing and securing a catheter in a peripheral vein;

Selecting appropriate endotracheal tubes and testing for cuff integrity;

Safely inducing anaesthesia;

Safely performing endotracheal intubation;

Connecting the patient to the anaesthetic machine and using appropriate fresh gas flow and vaporiser settings;

Monitoring the patient for depth of anaesthesia and physiological stability using basic techniques (eg palpation, watch and stethoscope) and some electronic monitoring devices (eg pulse oximeter, capnograph, blood pressure monitor);

Demonstrating informed knowledge of acceptable ranges for pulse rate (BPM), haemoglobin oxygen saturation (% saturation), peak expired CO₂ and inspired CO₂ (mm Hg or %) and blood pressure (mm Hg);

Suggesting basic approaches to managing common intra-operative complications including inadequate (insufficient/excessive) anaesthetic depth, low blood pressure, inadequate or excessive respiration, poor oxygen saturation, and low body temperature;

Demonstrating awareness of anaesthetic and peri-operative risks and preparedness for minimising risk.

Overarching the performance of tasks listed is the Examiner's judgement on the safety of the patient during the process.

Final (Clinical) Examination - Practical examinations

5.2.2.4 Practical (Small Animal) Surgery

The aim of this examination is to assess whether a candidate is competent to a standard required for satisfactorily performing in small animal practice, to complete a basic, commonly performed surgical procedure.

Candidates are expected to carry out an ovariohysterectomy or cystotomy on an anaesthetised dog. Ovariohysterectomy is generally the procedure of choice.

Candidates will need to complete the procedure within 120 minutes. In addition, they are given 15 minutes for scrubbing, gowning and gloving, and 10 minutes after completing the procedure to write a discharge note

for the owner. There will be one Examiner and usually one experienced Observer, and one veterinary nurse/technician for assistance.

The Examiner may interact with the candidate in the same way as might a senior practice colleague, as the candidate progresses through the procedure.

Assessment of the candidate's surgical competence includes assessment of a range of activities as listed below but emphasis is placed on ability to safely perform the procedure. The Examiner's judgement on the safety of the patient may modify the course of the procedure. A lack of knowledge or competence will require the procedure to be terminated in the interests of the animal's welfare.

The Practical Surgery Examination assesses competency in the following procedures and activities:

Discussing if the surgical treatment is indicated and appropriate;

Planning and preparing for the surgical procedure including pre-operative procedures to maintain asepsis, including gowning, scrubbing and gloving;

Preparing the animal for surgery including pre-operative procedures to maintain asepsis, including patient positioning and aseptic surgical site preparation;

Performing the procedure at 'entry level' standard. This includes demonstrating:

- knowledge of relevant surgical anatomy;
- correct use of surgical equipment including knowledge of the proper instrument names;
- correct surgical approach;
- appropriate tissue handling;
- effective haemostasis;
- appropriate surgical lavage;
- correct approximation of tissues including appropriate suture selection, and knot security;
- completing the procedure within an acceptable timeframe (and within the time allowed).

Demonstrating understanding and anticipation of intraoperative complications and/or problems, and taking steps to prevent potential complications/problems;

Discussing approaches to managing problems arising postoperatively as a result of faulty technique, infections, and interference to the surgical site by the patient, and likely outcomes;

Demonstrating appreciation for the need for time restraint for surgical procedures;

Modifying surgical techniques to meet changing circumstances;

Demonstrating an understanding of supportive care/therapy appropriate to the needs of the procedure and the patient;

Providing immediate post-operative care and assessment;

Writing and discussing a discharge note with instructions for the owner for aftercare at home after discharge.

Overarching the performance of tasks listed is the Examiner's judgement on the safety of the patient during the process.

Final (Clinical) Examination - Practical examinations

5.2.2.5 Pathology Practical Examination

This examination assesses practical ability as well as theoretical knowledge of pathology (morbid anatomy), clinical pathology, microbiology and parasitology. It is designed to assess the candidate's ability to distinguish the significant pathological changes of common diseases of all species from insignificant features such as postmortem change, and to draw correct interpretations and conclusions from the material. The disease conditions will cover as wide a range of domestic species as possible, including birds, as well as companion and production animals.

This exam consists of 10 questions on pathology and clinical pathology presented in sequence to the candidates as images and questions in PowerPoint format. Most images will be of gross specimens; however a few photomicrographs will be included, together with history and questions. Images are projected onto a large presentation screen. Candidates are allowed ten minutes for making hand-written answers to each question. Candidates will need to bring a pen, paper will be provided

The process of answering the questions in this exam can be divided into four sub-sections:

1. Recognition & description of abnormality;
2. Interpretation (morphological and aetiological diagnoses) and description of pathogenesis and/or clinical significance;
3. Action for confirmation of diagnosis; and
4. Advice as to management.

If a candidate misinterprets a depicted abnormality and hence makes an incorrect pathological diagnosis, some credit for that question may be salvaged if subsequent choices of disease processes, diagnosis and management options, etc, show that the candidate is using correct deductive logic.

The Practical Pathology Examination assesses competency in the following activities:

Identifying and providing written descriptions of abnormal features of specimens depicted in images (gross images or photomicrographs);

Perusing tables of clinical pathological data (biochemical and haematological) and recognising and describing the significance of deviations from normal ranges;

Relating these pathological or clinical pathology changes to the history and clinical information accompanying the data/ images, and deducing from these the dominant disease process/es that are most likely to be present, and from these deductions make the most likely pathological diagnosis, and, where appropriate, providing a rational list of differential diagnoses;

Naming the most likely cause of the depicted disease (where this should be apparent for the particular condition) and describing its pathogenesis;

Providing details of procedures (such as the nature of specimen submission) that would be required to confirm both the pathological diagnosis (and the aetiological diagnosis where this should be apparent for the particular condition);

Describing any appropriate advice that might be given to managers/owners in order for them to better manage the case, where this is appropriate to the case.

Final (Clinical) Examination - Practical examinations

5.2.2.6 Physical Examination of a Dog and Cat

This examination assesses the candidate's competency in basic handling of dogs and cats and performing a routine physical examination and a detailed examination of one body system/area, chosen by the Examiner.

This is a 30-minute examination. There will be one Examiner and a veterinary nurse/technician for assisting.

The following competencies will be assessed:

Safely approach a dog that is unknown to them; *

Lift dog onto examination table; *

Remove a cat from a cage; *

Safely and comfortably lift the cat onto the examination table; *

Perform a basic clinical examination; *

Detailed examination of a body system/area;

Open mouth to administer a tablet;

Technique for taking rectal temperature;

Sites and techniques for injections;

Restrain for cephalic or jugular vein sampling.

*All candidates are expected to perform these tasks.

Final (Clinical) Examination - Practical examinations

5.3 Assessment Protocols - Oral and Practical Examinations

Assessment in the Final (Clinical) Examination, oral and practical, is at a level based on the competence standards of the veterinary profession as benchmarked against Australasian graduates.

Candidates will be graded for each oral and practical examination, and overall, as having 'met the required standard of competence' or 'not met the required standard of competence'.

All oral examinations will be recorded, and recordings will be available for review by Examiners and the Chief Examiner.

5.3.1 Oral Examinations (Vivas)

The format for the oral examination will be the same for the three oral examinations. Each candidate will be presented with a number of clinical scenarios to work through.

Candidates will be assessed on their ability to describe clinical abnormalities, identify probable differential diagnoses, and investigate and manage each clinical problem. Emphasis will be on evidence that the candidate demonstrated the ability to make logical decisions with respect to case investigation and management and was able to justify chosen diagnostic and treatment plans.

A rubric will be used to guide Examiners in their evaluation of a candidate's performance for each scenario. The purpose of the rubric is to:

- provide a mechanism for consistent, objective and fair assessment of a candidate's performance in each individual scenario, and overall;
- enable the Examiner to give useful objective feedback to the candidate.

The rubric consists of four components (Table 5):

- The first three components assess the candidate's ability to work through a problem at a level equivalent to that expected of a final year student at an Australasian Veterinary School.
- The fourth component assesses whether the candidate has demonstrated a sound clinical process that allows them to effectively investigate and manage cases, rather than simply applying what they have learnt from reading a text book.

Table 5. Assessment rubric

Assessment rubric	Weighting (%)
a) <i>What do you see?</i> - Initial response to the scenario - What information do you need (questions for client etc)	10
b) <i>What are you thinking?</i> - Abnormalities observed based on presenting signs/data - Problem list so far - If left untreated what is the likely progression of the problem?	20
c) <i>What will you do?</i> - How will you investigate the problem? - What is your differential diagnosis? - How will you confirm your diagnosis, manage the case, minimise the risks?	30
d) <i>Has the candidate demonstrated a logical and safe approach to investigating and managing the case?</i> - Is there evidence of sound clinical judgement? - Can the candidate argue the strengths and weaknesses of different approaches? - Is there evidence of a sound clinical process that is transferable to other cases?	40

Score for d) will be guided by responses a) – c).

5.3.2. Practical Examinations

The lists of practical skills/competencies outlined in each of the practical examinations in section 5.2.2 will form the protocol of assessment for the practical examinations. A detailed record on each skill performed will be kept so that effective and relevant feedback can be provided to the candidate.

During the anaesthesia and surgery practical examinations the Examiner may interact with the candidate in the same way as a senior practice colleague might. They will communicate with the candidate such as to provide the candidate with opportunity to demonstrate understanding and justify decisions on procedural details.

There will be an oral component to the Equine Practice Examination. During the practical session the candidate will be presented with two to four clinical scenarios where they are expected to be able to describe clinical abnormalities, outline their approach to investigation of the problem, provide differential diagnosis and a management plan for the problem in each scenario.

Candidates will be assessed using the rubric in Table 5. In the process of working through the case scenarios, the candidate will also be assessed on practical competence. Emphasis will be placed on clinical examination of the horse.

Final (Clinical) Examination - Practical examinations

5.3.3. Grading

No marks are given to candidates. An overall evaluation of performance will be graded as 'met the required standard of competency' or 'did not meet the required standard' for each oral and practical examination.

5.4 Pass Mark for the Final (Clinical) Examination

Each of the nine sections of this examination is graded as 'Met the required standard of competency' or 'Did not meet the required standard of competency'. A 'Met the required standard of competency' grade in all 9 sections is required for passing the Final (Clinical) Examination.

5.5 Preparing for the Final (Clinical) Examination

Candidates taking this examination are encouraged to critically consider whether they have had sufficient opportunities for developing the necessary skill level to perform at the required standard of competency, in both the oral and practical examinations. They are advised to seek educational opportunities.

Candidates need to make sure they have clinical experience and basic animal handling/husbandry skills at a level as outlined in the individual exam descriptions. If they are lacking in experience working with dogs, horses, cattle and sheep, they must gain this experience before taking the examination. To succeed in the surgery and anaesthesia sections, candidates should ensure they have performed small animal surgery and anaesthesia in an instructional or clinical setting prior to attempting the examination.

Candidates are encouraged to seek hands-on clinical instructional experience because other means of learning, including reading material, videos and other electronic resources, are far less effective learning tools.

Candidates must use the Clinical Skills Checklist (Appendix 4) to identify areas where they may need to gain more clinical experience to be adequately prepared for the Final (Clinical) Examination.

Candidates must submit the skills checklist as a supporting document when declaring on their enrolment form that they have in fact had sufficient experience in conducting common clinical procedures on the species used in this examination to perform at a pass level.

Joining veterinary practices is an effective way for hands-on clinical instructional experience and practicing opportunities, and candidates are strongly encouraged to seek joining veterinary practices.

AFTER a candidate has passed the Preliminary (MCQ) Examination, they can apply for a form of 'limited', 'specific' or 'conditional' registration which would allow them to work under supervision in a veterinary practice while they prepare for the Final (Clinical) Examination. They need to contact and apply with the relevant veterinary registration board for the appropriate registration (see Appendix 2).

AVBC cannot assist with organising clinical practical experience. Candidates need to contact veterinary practices and organisations directly.

5.6 Re-sitting the Final (Clinical) Examination

If candidates achieve a grade of 'Met the required standard of competency' in at least 6 of the 9 sections of the examination, supplementary examination in the section/s with a grade of 'Did not meet the required standard of competency' will be offered during a supplementary assessment period. Supplementary assessment must be undertaken at the next available examination session.

For any failed section(s) of the Final (Clinical) Examination, the Chief Examiner will provide detailed feedback to the candidate.

Final (Clinical) Examination - Practical examinations

There is a limit on the number of attempts that can be made at the Final (Clinical) Examination and a limit on the time during which the Final (Clinical) Examination has to be completed:

1. Re-sitting the entire Final (Clinical) Examination

Candidates are allowed three attempts at the (entire) Final (Clinical) Examination. If they fail the examination twice, the third and final attempt will have to be approved by the AVE Committee.

2. Re-sitting failed sections (up to three) of the Final (Clinical) Examination - Supplementary examinations

Candidates are allowed two supplementary examinations of a failed section(s) (up to three sections) of the Final (Clinical) Examination. If they fail supplementary assessment twice, they will be required to re-sit the entire Final (Clinical) Examination.

3. The Final (Clinical) Examination must be completed within five years of passing the Preliminary (MCQ) Examination otherwise the candidate will be required to re-start the AVE process.

4. **Re-sitting the entire Final (Clinical) Examination or undertaking supplementary assessment of failed sections of the examination must be within the validity period of the English language test.**

Validity can be renewed by either re-sitting the test to current standards or by re-validating a previous test (which satisfies current standards). See section 3.2.

5.6.1 Preparing for re-sitting

Before being allowed to re-sit either any failed section(s) or the entire Final (Clinical) Examination, the candidate will be required to provide evidence to the AVE Committee

that they have undertaken appropriate activities that will enhance their veterinary knowledge and experience. They are expected to work under the advisement of the AVE Committee in planning and completing additional training:

1. A counselling session will be arranged with a member of the AVE Committee to discuss how the candidate proposes to gain the experience and additional training required.
2. The candidate will be required to develop and submit to the Committee member, a plan of the additional training they propose to do in the lead up to supplementary assessment.
3. The candidate will be required to keep a case log of additional training and submit it to the Committee member and the AVE Coordinator at least one month before the examination, to verify that they have gained additional training and experience.
4. The Committee member will report to the AVE Committee on the communication with the candidate and their exam preparation. The Committee may recommend the candidate be counselled to consider whether they are ready to proceed to supplementary examination or to re-sitting the entire examination, whichever is applicable. The Committee acknowledges that the final decision on progressing with the AVE rests with the candidate.

5.6.2 Applying and fees for re-sitting

A separate application to sit the examination must be completed and another examination fee paid. Details can be obtained by contacting the AVE Coordinator.

6 Examination results & certification

Results of the Preliminary (MCQ) Examination are sent in writing by email within eight weeks. No results are given by telephone.

Results of the Final (Clinical) Examination are sent in writing by email within eight weeks. No results are given by telephone.

Following successful completion of the Preliminary and Final Examinations, candidates are eligible to receive a Certificate issued by the AVBC.

The **AVE Certificate in Veterinary Science** entitles successful candidates to apply for full registration in any State or Territory in Australia or in New Zealand. They need to present the Certificate to the Veterinary Board in the State or Territory in which they intend to register or to the Veterinary Council of New Zealand. The addresses of the Boards and the Council are given in **Appendix 2**.

Applying for the AVE

In order to sit the AVE, candidates first need to apply to AVBC for an Eligibility Assessment of qualifications. Application forms are available on the AVBC website.

Upon approval of eligibility to undertake the AVE, candidates will be sent an application form for the Preliminary (MCQ) Examination.

After passing the Preliminary (MCQ) Examination, candidates will be sent an application form for the Final (Clinical) Examination and documentation to assist in preparation for the exam.

The **closing date** for the acceptance of applications to sit the Preliminary (MCQ) Examination is **8 February each year**. Late applications will **not** be considered.

The **closing date** for the Final (Clinical) Examination, which is usually held in November each year, is **1 September**.

A candidate who has been assessed as eligible to sit the AVE will not have to re-submit the eligibility application paperwork again - as long as they remain in contact with the AVE. They will be placed on an email contact list and can expect to receive emails from time to time with information about upcoming examination sessions and application forms, etc.

A candidate's English language test result must be current at the time they sit an AVE examination. Validity can be renewed by either re-sitting the test to current standards or by re-validating a previous test (which satisfies current standards). See section 3.2 for more information on this.

Examination Fees

8.2 Examination Fees

Examination fees are payable in advance by candidates attempting the examination.

The schedule of fees can be obtained from the AVBC website or by contacting the AVBC Office. **Each fee allows only one attempt at each examination.** If candidates are allowed to sit again, a separate application to sit the examination must be completed and another examination fee paid.

Payment by direct transfer or credit card is preferred.

8.2 Withdrawal Fees

Once a candidate has applied and been accepted for a specific examination session, withdrawal from the examination session will result in a cancellation fee.

- For the Preliminary (MCQ) Examination, providing notice of withdrawal is received more than four weeks prior to the examination, a **cancellation fee of A\$760** will apply. This will be deducted from the amount of examination fee to be refunded. The examination fee will be forfeited altogether if the withdrawal is made less than four weeks prior to the examination, unless a medical certificate is provided in which case the A\$760 cancellation fee will apply.

- For the Final (Clinical) Examination, withdrawal more than twelve* weeks before the start of the examination will result in a **cancellation fee of A\$1,900**. Withdrawal less than twelve* weeks before the start of the examination will result in the total fee being forfeited.
- Withdrawal from a supplementary examination will result in the total fee being forfeited.

* AVEC may vary the period of notice of withdrawal where it is anticipated that an examination session may be oversubscribed, or where consideration is being given to holding an additional full clinical examination session mid-year. Written notice of the extension of the withdrawal period will be given to candidates by email together with the application form.

9 Rules of Conduct for the AVE

Once assessed as eligible to sit the AVE, candidates are provided with a copy of the Rules of Conduct for the Australasian Veterinary Examination (AVE) (see **Appendix 5**). These relate to the Preliminary (MCQ) and Final (Clinical) examinations, and outline the responsibilities and obligations of a candidate.

On enrolment to sit an AVE examination, candidates are asked to declare that they have read and understood that they must abide by the Rules of Conduct and not engage in any forms of irregular behaviour.

10 Special Consideration

The AVBC provides a mechanism for candidates of the AVE to apply for special consideration in circumstances that:

- may have affected their performance in the AVE or section(s) of the AVE; or
- may affect/have affected their ability to sit a scheduled examination or examination section of the AVE.

Generally illness, injury, misadventure and essential commitments will be considered as grounds for an application for special consideration.

If successful, an application for special consideration may provide a candidate with the opportunity to re-sit the examination section(s). It is **not** a means for having an

unsatisfactory result changed or to re-sit an examination section(s) upon notification of results.

Applications for special consideration in relation to exam performance must be submitted no later than **10 days** after the date of the examination. Applications for special consideration in relation to sitting a scheduled examination should be submitted **prior** to the date of the scheduled examination. Applications received after notification of exam results will **not** be considered.

Applications must be submitted in writing on the prescribed form and within the prescribed timeframe. A fee for lodging an application for special consideration will be applied. **Further details are available from the AVE Coordinator. Email: ave@avbc.asn.au**

11 Appeals

The AVBC provides an internal appeal mechanism for AVE applicants and AVE candidates to request a review of a decision made by the AVBC or the AVE Committee (AVEC) on their eligibility for the AVE or on their performance assessment in the AVE.

The available grounds of appeal are listed in an Appeals document available from the AVE Coordinator. If a candidate believes they have grounds for appeal against the process in any section of the Preliminary or Final Examination, an appeal can be made to AVBC.

An application for review of the outcome of an AVE eligibility assessment must be submitted to the AVE Coordinator **within 28 days** of notification of the assessment outcome.

Prior to lodging an application for review of a decision on performance assessment, the candidate is encouraged to engage in post-examination feedback where AVE

candidates and counsellors may resolve concerns about decisions on performance by means of personal communication.

An application for review of a decision on examination performance must be submitted to the AVE Coordinator **within 28 days** of notification of the examination result or **within 28 days** of post-examination feedback, whichever is the latter.

The outcome of an appeal will **not** exempt an AVE candidate from any of the requirements of the AVE.

Appeals must be submitted in writing on the prescribed form and within the prescribed timeframe. A fee for lodging an appeal will be applied. **Further details are available from the AVE Coordinator. Email: ave@avbc.asn.au**

12.1. Recommended References

The Preliminary and Final Examinations are set on the assumption that you have undertaken some reading revision. The following lists have been compiled to help you in that regard. The recommended references contain basic information suitable for AVE candidates. The most recent edition at the time of publication has been listed.

Please note that the AVBC is unable to provide you with these texts or to act on your behalf in their purchase.

The list is not exhaustive or exclusive; you may choose to consult alternative texts.

If the Preliminary (MCQ) Examination is attempted overseas, the list may be unavailable. You should then consult a school of veterinary science in your country for equivalent texts.

Please note that the links in this section were correct on the date of upload of this information booklet.

Recommended References

Small Animal Practice

- Maddison J. and Volk H., *Clinical Reasoning in Small Animal Practice*, 2015 ISBN 978-1118741757
- Tilley L.P. and Smith F.W.K., *Blackwell's 5-minute Veterinary Consult*, 6th Edition, 2015 ISBN 978-1118881576
- Nelson R.W. and Couto C.G., *Small Animal Internal Medicine*, 6th Edition, 2019 ISBN 978-0323676946
- Tasker S. and Harvey A., *BSAVA Manual of Feline Practice, a Foundation Manual*, 2013 ISBN 978-1905319398
- Tobias K.M. and Johnston S.A., *Veterinary Surgery, Small Animal*, 2012, 2 vols ISBN 978-1-4377-0746-5-part Vol 1: 9996073696-part Vol 2: 9996073637r
- Fossum T.W., *Small Animal Surgery*, 5th Edition, 2018 ISBN 978-0323443449
- Dugdale A. (ed), *Veterinary Anaesthesia: Principles to Practice*, 2010
- Thrall D. (ed), *Textbook of Veterinary Diagnostic Radiology*, 7th Edition, Saunders, 2018
- Noakes D.E., Parkinson T.J. and England G., *Veterinary Reproduction and Obstetrics* 10th Edition, 2018 select chapters

Equine Practice

- Robinson N.E., *Current Therapy in Equine Medicine*, 7th Edition, 2014
- White N.A. and Moore J.N., *Current Techniques in Equine Surgery and Lameness*, 2nd Edition, 1998
- Munroe G. and Weese S. (eds), *Equine Clinical Medicine, Surgery and Reproduction*, Manson 2011
- Dugdale A. (ed), *Veterinary Anaesthesia: Principles to Practice*, 2010 select chapters
- Thrall D. (ed), *Textbook of Veterinary Diagnostic Radiology*, 7th Edition, Saunders, 2018

Production Animal Practice

- Parkinson T.J., Vermunt J.J. and Malmo J., *Diseases of cattle in Australasia*, 2nd Edition, 2019
- Abbott K., *The Practice of Sheep Veterinary Medicine*, Publisher: University of Adelaide Press. Available as a free ebook from www.adelaide.edu.au/press
- West D.M., Bruere A.N., Ridler, A.L.; *The Sheep: Health, Disease & Production*, Massey University Press 2018
- Taylor D.J., *Pig diseases*, 9th Edition, 2013
- Zimmerman, J.J. et al. (ed.), *Diseases of Swine*, 11th Edition, Wiley-Blackwell, Chichester, West Sussex, 2019
- Swayne D.E. (ed.), *Diseases of Poultry*, 14th Ed, Wiley-Blackwell, 2020
- Greenacre C.B., Morishita T.Y., *Backyard Poultry Medicine and Surgery*, 2014, Wiley-Blackwell
- Thrall D. (ed), *Textbook of Veterinary Diagnostic Radiology*, 7th Edition, Saunders, 2018
- Fubini S.L. & Ducharme N., *Farm Animal Surgery*, 2nd Edition, Saunders, 2016
- Dugdale A. (ed), *Veterinary Anaesthesia: Principles to Practice*, 2010 select chapters
- Noakes D.E., Parkinson T.J. and England G., *Veterinary Reproduction and Obstetrics* 10th Edition, 2018 select chapters

Resources - Useful websites

Preventive Medicine/ Epidemiology

Pfieffer D.U., *Veterinary Epidemiology: An Introduction*, 2009

Stevenson M., *An Introduction to Veterinary Epidemiology*, 2008

(see http://www.massey.ac.nz/massey/fms/Colleges/College%20of%20Sciences/Epicenter/docs/ASVCS/Stevenson_intro_epidemiology-web_2008.pdf)

Pathology and Clinical Pathology

Zachary J.F. (ed), *Pathologic Basis of Veterinary Disease*, 6th Edition, 2016

McGavin D. et al., *Thomson's Special Veterinary Pathology*, 3rd Edition, 2000

Stockham S.L. and Scott M.A., *Fundamentals of Veterinary Clinical Pathology*, 2nd Edition, Wiley-Blackwell 2008
ISBN 978-0-813-80076-9

Basic Clinical Sciences

Riviere J.E. & Papich M.G. (2017), *Veterinary pharmacology and therapeutics*, 10th Edition

Hoboken NJ: John Wiley & Sons Inc, Wiley-Blackwell, John Wiley & Sons, Incorporated

ISBN: 978 1118855775, 1118855779, 978 1118855829, 1118855825

Datefield R., *Veterinary Toxicology for Australia and New Zealand*, 2017

Australasian Animal Parasites Inside and Out (2018, January 11). Retrieved 10 January 2018, from Australian Society for Parasitology Inc. website: <http://parasite.org.au/wp-content/assets/Parasitology2015.pdf> ISBN: 978-0-646-93560-7

Bowman D.D., *Georgi's Parasitology for Veterinarians*, 11th Edition, 2020

Carter G.R. & Wise D.J., *Essentials of Veterinary Bacteriology and Mycology*, 6th Edition, 2004

Sisson S., *A textbook of Veterinary Anatomy*, 2016, ISBN 1537335022, 9781537335025

Dyce, Sack and Wensing's *Textbook of Veterinary Anatomy*, 5th Edition, Saunders, 2017, 0323442641, 978-0323442640

Candidates may also consult:

- Australasian faculty handbooks which indicate the scope of the curricula used in Australian veterinary education. Handbooks may be obtained online from Australasian universities with faculties of veterinary science.
- prominent veterinary periodicals, for information about new treatments. Textbooks can be correct in principle but out of date.
- Consultation of a veterinary anatomy text that includes all species is essential.

12.2. Useful Websites

Useful Websites

Online courses

These courses have been designed to help candidates prepare for the North American Veterinary Licensing Examination (NAVLE). They are not endorsed by AVBC and some of the information may not be relevant to an Australian context, but they may provide useful revision and practice at answering multiple choice questions.

- VetPrep course <http://www.vetprep.com/>
- Zuku Review course <http://www.zukureview.com/>

Animal Health Australia

<https://www.animalhealthaustralia.com.au>

Animal Health Australia

Accreditation Program for Australian Veterinarians: online initial accreditation training program, 2016

<http://www.animalhealthaustralia.com.au/training-centre/accreditation-program-for-australian-veterinarians-apav/>

Resources - Useful Websites

Ausvetplan manuals and documents

<http://www.animalhealthaustralia.com.au/our-publications/ausvetplan-manuals-and-documents/>

You can download articles and summaries of a wide selection of diseases and disease strategy. These contain excellent descriptions of the diseases. You can also open the "Publications" link to find the annual reports which provide an overview on regulatory, trade and production diseases of livestock.

Australian code of practice for the care and use of animals for scientific purposes

<https://www.nhmrc.gov.au/about-us/publications/australian-code-care-and-use-animals-scientific-purposes>

Information on chemical residues and adverse experiences

<https://www.apvma.gov.au>

The Poisons Standard - the Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP)

<https://www.tga.gov.au/scheduling-basics>

<https://www.tga.gov.au/publication/poisons-standard-susmp>

MIMS IVS Annual (www.mims.com.au) - contains product and prescribing information for veterinary practitioners and information on withholding periods, export slaughter intervals, adverse experience report forms, and exotic disease outbreak protocols. (You would have to buy this). The information is available on the APVMA site <https://apvma.gov.au>, and in the Guidelines of the VPRBV, guideline 6 (for Victorian specifics) www.vetboard.vic.gov.au/VPRBV/Vets and look for the Guidelines.

Information on Emergency Animal Diseases

What are emergency animal diseases?' Queensland Department of Employment, Economic Development and Innovation <http://www.daf.qld.gov.au/biosecurity>

Diseases Acquired From Animals

<https://www.safeworkaustralia.gov.au/>

State Registration Board websites (see **Appendix 2**)

You can view the current and relevant Acts and Regulations applicable to veterinarians in each State and Territory.

Sheep worm control

www.wormboss.com.au

Food Hygiene and Large animals

www.mla.com.au

Veterinary school websites which may contain a detailed description of units of study (see **Appendix 2**)

The International Veterinary Information Service

www.ivis.org

Radiology websites:

- Imaging Anatomy website of the Illinois College of Veterinary Medicine
https://vetmed.illinois.edu/courses/imaging_anatomy/
 - DVM Insight Image Library
<https://www.dvminsight.com/ImageLibrary/Default.aspx>
 - Teaching and learning about veterinary radiology
<http://www.veterinaryradiology.net/>
-

Clinical Pathology

eClinPath.com

NAVLE website for practice questions

<http://nbvme.org/?id=80&page=Practice+Versions-NAVLE>

PAVE website for practice questions

<https://www.aavsb.org/licensure-assistance/international-pathway/take-qualifying-science-examination/>

Resources - Library Facilities, Additional Resources

12.3. Library Facilities

If you are in Australia you may be able to access the library facilities of the veterinary schools. Please contact the individual libraries.

The University of Sydney

AVE applicants are eligible for community borrower membership. There is a fee involved. This allows you to borrow from any University of Sydney library. There is a limit of 10 items per time.

<https://library.sydney.edu.au>

The University of Queensland

You may join as a community member. A cost is involved. You may have access to the materials on site but you must be a member to borrow.

<https://web.library.uq.edu.au/locations-hours/uq-gatton-library-jk-murray-library>

The University of Adelaide

Roseworthy Campus, Roseworthy SA
<https://www.adelaide.edu.au/library/>

The University of Melbourne

You may become a paying member of the library which entitles you to borrow a certain number of low-use books (those not required by students or staff). The latest editions of texts are not available if required by staff or students but older editions may be available.

<https://library.unimelb.edu.au/veterinary-science>

Murdoch University

Any person can use the resources within the library. If you wish to borrow material from the library then you need to join as a community borrower. There is a cost involved. Many of the major texts are kept in a reserve section where they can only be borrowed overnight.

<http://library.murdoch.edu.au/>

Charles Sturt University

Wagga Wagga NSW
<http://www.csu.edu.au/division/library/home>

James Cook University

Townsville QLD
<https://www.jcu.edu.au/library>

12.4. Additional Resources

12.4.1 Preventive Medicine

APAV training program

Animal Health Australia has made available to AVE candidates its training program "Accreditation Program for Australian Veterinarians" (APAV) which will help to provide candidates with an awareness of national regulations, policies and issues in the area of animal health in Australia. New Zealand candidates should be aware of this material.

- Go to this link <http://www.animalhealthaustralia.com.au/training-centre/accreditation-program-for-australian-veterinarians-apav/>
- Select "online APAV Initial Accreditation Training Program". You have to create an account. (It is free!)
- Select course enrolment on the left menu. In the table there will be a drop down box in the top right that says 'select a course' – click on this and select APAV.

You then get access to all the information and some exercises to do. You don't have to pay; payment is only required if you want to be accredited.

Please note you cannot become APAV accredited until you are a fully registered veterinarian with an Australian State or Territory Registration Board and are approved by your State Chief Veterinary Officer. The purpose of enabling you to have access to this program is for education and revision purposes only.

Other suggested reference sites

- The World Organisation for Animal Health (OIE) - www.oie.int
- Food and Agriculture Organization of the United Nations (FAO) - www.fao.org
- The Program for Monitoring Emerging Diseases (ProMED) - www.promedmail.org
- Animal Health Australia - <https://www.animalhealthaustralia.com.au>
- The Australian Government Department of Agriculture, Water and the Environment - <https://www.agriculture.gov.au>
- State/Territory government websites
- Ministry of Primary Industries NZ - www.mpi.govt.nz

APAV-Handbook

Accreditation Program for Australian Veterinarians (APAV) Handbook

Disease Outbreak Investigation and Diagnostic Tests Properties and Choice

A worksheet on sensitivity and specificity - information about disease outbreak investigation and diagnostic tests.

Resources - Additional Resources, Bridging Courses, Counselling Advice

Preventive Medicine Study Group

Information to help a clinical exam cohort focus their study plans for this section and which encourages them to form their own interactive study group. One of the cohort would be required to volunteer to coordinate the group. Please email the AVE Coordinator at the appropriate time for this information.

Emergency Animal Disease (EAD) case study modules

These are online training modules which were developed by a consortium of academics from each of the Australian veterinary schools. They use a series of case studies to look at the essential elements of EAD identification and response and are available at <http://eadonline.com.au/>

State Medicine online training modules

These are a series of information and assessment modules in regulatory medicine used within the BVSc (Hons) program at the University of Queensland. They address the major pieces of legislation, veterinary acts, prescribing, etc - and end with a quiz.

User access is required. AVE clinical exam candidates seeking access to the State Medicine online training modules should send an email request to the AVE Coordinator and include their name and email address.

These training modules refer to Queensland specific legislation for examples, but are largely applicable across Australia, with some differences for New Zealand. Candidates should remain aware of the need to ensure they are familiar with local requirements.

Preventive Medicine - New Zealand

The AVE is a shared Australasian examination under the administration of the AVBC. Given that candidates can potentially register and practice in both countries and the close relationship between Australia and New Zealand, it would not be unreasonable to expect candidates to have some knowledge of regulations and diseases in both countries.

Candidates should be aware that on occasion questions may come up that refer to diseases or regulations in either country within the course of the examination and they should be expected to have at least some knowledge. At the same time these will not be the focus of any examination.

For example Hendra virus is a potentially fatal disease that has not been reported outside Queensland and Northern NSW. Any veterinarian in Australia is required to know about the disease and safety precautions and regulations around notification. It would not be unreasonable for New Zealand candidates to have some knowledge as it would for veterinarians working in States/areas of Australia where the disease had not been reported.

Candidates are expected to have some country specific areas of knowledge (for example government administration and structures) for Australia or New Zealand for their respective country of intended work, but also must be prepared to answer questions pertaining to the other country.

NZ Diseases and Pests.pdf

Biosecurity and Animal Welfare NZ.pdf

RVMs - Requirements for Authorising Veterinarians, MPI New Zealand 2015

12.4.2 Practical Examinations

Practical Anaesthesia

[Anaesthesia Notes 2015 VETS4012.pdf](#), H Keates

[Practical Anaesthesia Candidate Note 2019.pdf](#), H Keates

Practical Surgery

[Canine Ovariohysterectomy.pdf](#), R Seton 2018

12.5. Bridging Courses

There are no bridging courses available and the AVBC is not able to recommend any suitable alternatives.

12.6. Counselling Advice

Counselling advice may be available through the AVE Committee.

Appendix 1: Essential Attributes and Competences of the Veterinarian in Australia and New Zealand

The AVE Committee (AVEC) requires the competence level to be aligned to that of a new graduate from an Australasian Veterinary School. AVEC have adopted, as a basis, the AVBC Attributes of Veterinary Graduates and the Royal College of Veterinary Surgeons (RCVS) Attributes and Day One Competences of Veterinary Graduates. AVEC has further refined the list of Day One Competences they consider essential for a new graduate. The AVE essential competences provide a guide for candidates on what they have to demonstrate/do. The AVE essential competences underpin the format and the breadth of the AVE.

The AVBC Attributes of Veterinary Graduates:

Attributes relating to knowledge and understanding

Graduates will be able to demonstrate knowledge and understanding of:

- Scientific method at a level adequate to provide a rational basis for present veterinary practice, and to assimilate the advances in knowledge which will occur over their working life;
- The normal structure, function and development of animals, their interactions with their environment and the factors which may disturb these;
- The underlying basis of health and disease in a broad range of species;
- Fundamental clinical skills in a broad range of species;
- The principles of epidemiology, of diseases and zoonoses and their impacts on the environment;
- Public health and food safety;
- Economically and environmentally sustainable animal production systems;
- The veterinary legislative environment.

Attributes relating to skills

Graduates will have developed the following skills:

- The ability to acquire information from and about clients and perform and record a clinical examination of their animals and to store and retrieve such information;
- To collect, organise and analyse information in relation to specific problems, assessing its validity and reaching probabilistic judgements;
- To perform basic diagnostic and therapeutic procedures;
- To work and communicate effectively and empathetically with colleagues and clients through a range of media with compassion, courtesy, respect, honesty and without discrimination;
- An ability to perform effectively in a workplace including an understanding of organisational systems, human and physical resource management, performance indicators, occupational health and safety, knowledge management and quality control;
- Self-management and group leadership.

Attributes relating to attitudes as they affect professional behaviour

During their veterinary education, students should acquire the professional standards which are outlined in professional codes of conduct and the following attitudes which are regarded as fundamental to veterinary practice:

- An appreciation of the complexity of ethical issues, the diversity of stakeholder perspectives and the range of cultural values;
- A desire to promote animal welfare;
- An awareness of the need to communicate with clients and to involve them fully in planning and management;
- An ability to recognise when a clinical problem exceeds their capacity to deal with it safely and efficiently and of the need to refer the case for help from others when this occurs;
- A willingness to work effectively in a team with other relevant professionals;
- A recognition that it is not always in the interests of clients to do everything that is technically possible to make a precise diagnosis or attempt to modify the course of a disease;
- Recognition of the critical role of veterinarians in biosecurity and in the management of veterinary issues that have national and international implications.

Appendix 1

AVE Essential Competences:

Logically and systematically work through a clinical scenario to assess the health and welfare of animals;

Understand the aetiology, pathogenesis and clinical signs, diagnosis and treatment of common diseases of animals in Australasia and be able to recognise exotic diseases of significance;

Safely handle and examine the common domestic species;

Obtain a history on an individual animal or an animal group;

Perform a clinical examination and appropriately use common diagnostic procedures and devices including those applicable to clinical pathology and diagnostic imaging;

Interpret clinical findings and diagnostic results, including clinical pathology results, and use results to assist in deductive reasoning to developing a differential diagnostic list and probable diagnosis;

Implement an appropriate treatment plan including pain management plan if required;

Prepare accurate clinical medical records;

Advise on preventive medicine and veterinary public health management appropriate to species;

Recognise when euthanasia should be recommended, and describe the procedure of safe and humane euthanasia;

Perform a postmortem examination, interpret results, record results, and harvest, store and submit samples appropriately;

Provide emergency first aid to both large and small animals;

Demonstrate knowledge of the pharmacology, indications, contraindications, and regulation of therapeutics commonly used in veterinary practice, in particular, of antimicrobials (including good stewardship), analgesics, sedatives and anaesthetics;

Safely provide sedation, anaesthesia and pain management in common medical and surgical cases;

Correctly perform a common surgical procedure within a defined time, demonstrating accurate knowledge of regional anatomy, and correct application of the principles of aseptic surgery.

Communicate effectively and act in a professional manner as defined by the AVA Code of Conduct
<http://www.ava.com.au/conduct>

The RCVS Day One Competences:

The Royal College of Veterinary Surgeons Day One Competences - Edition Published June 2020

<https://www.rcvs.org.uk/publications/rcvs-day-one-competences-june-2020/rcvs-day-one-competences-june-2020.pdf>

Appendix 2a: Schools of Veterinary Science in Australasian Universities

School of Veterinary Science

The University of Sydney
NSW 2006
Tel: (02) 9351 2222
www.usyd.edu.au

School of Veterinary Science

The University of Queensland
Gatton Campus
QLD 4343
Tel: (07) 5460 1201
www.uq.edu.au/gatton

Faculty of Veterinary and Agricultural Sciences

The University of Melbourne
Victoria 3010
AUSTRALIA
Tel: 13 MELB (13 6352)
www.fvas.unimelb.edu.au

School of Veterinary and Life Sciences

Murdoch University
MURDOCH WA 6150
Tel: (08) 9360 6000
www.murdoch.edu.au

School of Animal and Veterinary Sciences

Charles Sturt University
Boorooma St
NORTH WAGGA WAGGA NSW 2650
Tel: (02) 6933 2019
Email: savs-office@csu.edu.au
www.csu.edu.au

School of Veterinary and Animal Science

James Cook University
TOWNSVILLE QLD 4811
Tel: (07) 4781 4111
www.jcu.edu.au

School of Animal and Veterinary Sciences

Roseworthy Campus
The University of Adelaide
ROSEWORTHY SA 5371
Tel: (08) 8313 7335
www.adelaide.edu.au

School of Veterinary Science

Massey University
Private Bag 11 222
Palmerston North 4442
NEW ZEALAND
Tel: 0011 64 6 356 9099
Email: contact@massey.ac.nz
www.massey.ac.nz

Appendix 2b:

Australasian Veterinary Registration Boards

NEW SOUTH WALES

Veterinary Practitioners Board of New South Wales
Suite 7.09, 247 Coward Street
MASCOT NSW 2020

Tel: (02) 8338 1177

Email: admin@vpb.nsw.gov.au

www.vpb.nsw.gov.au

VICTORIA

Veterinary Practitioners Registration Board of Victoria
Level 14, 10-16 Queen Street
MELBOURNE VIC 3000

Tel: (03) 9620 7444

Email: communications@vetboard.vic.gov.au

www.vetboard.vic.gov.au

QUEENSLAND

Veterinary Surgeons Board of Queensland
Level 4, 41 George Street
BRISBANE QLD 4000

Tel: (07) 3087 8777

Email: vsbqld@daf.qld.gov.au

www.vsb.qld.gov.au

TASMANIA

Veterinary Board of Tasmania
PO Box 909
SANDY BAY TAS 7006

Tel: 0400 848 661

Email: vetboardtas@gmail.com

<http://dpi.pwe.tas.gov.au/biosecurity-tasmania/animal-biosecurity/veterinary-board-of-tasmania>

WESTERN AUSTRALIA

Veterinary Surgeons Board of Western Australia
Postal address:
PO Box 1721
MELVILLE SOUTH WA 6156

Office:

Suite 1, First Floor, Melville Professional Centre
275 Marmion Street
MELVILLE WA 6156

Tel: (08) 9317 2353

Email: admin@vsbwa.org.au

www.vsbwa.org.au

AUSTRALIAN CAPITAL TERRITORY

ACT Veterinary Practitioners Board
Transport Canberra and City Services
GPO Box 158

CANBERRA ACT 2601

Tel: (02) 6207 0012

Email: TCCS.vetboard@act.gov.au

<https://cityservices.act.gov.au/pets-and-wildlife/veterinary-practitioners-board>

NORTHERN TERRITORY

Veterinary Board of the Northern Territory
GPO Box 3000
DARWIN NT 0801

First Floor, John England Building, Berrimah Farm
Makagon Road
BERRIMAH NT 0828

Tel: (08) 8999 2028

Email: vetboard@nt.gov.au

<https://dpi.nt.gov.au/boards-and-committees/veterinary-board-of-the-NT>

SOUTH AUSTRALIA

Veterinary Surgeons Board of South Australia
GPO Box 11020
ADELAIDE SA 5001

Tel: (08) 8359 3334

Email: admin@vsbsa.org.au

www.vsbbsa.org.au

NEW ZEALAND

Veterinary Council of New Zealand
Level 10, the Bayleys Building
36 Brandon Street
Wellington 6143
NEW ZEALAND

Tel: 0011 64 4 473 9600

Email: vet@vetcouncil.org.nz

www.vetcouncil.org.nz

Appendix 2c: Other useful addresses

AUSTRALIAN VETERINARY ASSOCIATION LTD

Unit 40, 6 Herbert Street
ST LEONARDS NSW 2065
AUSTRALIA

Tel: 1300 137 309
Email: members@ava.com.au

www.ava.com.au

NEW ZEALAND VETERINARY ASSOCIATION LTD

Level 2, 44 Victoria Street
Wellington
NEW ZEALAND 6142

PO Box 11 212
Wellington 6142
NEW ZEALAND

Tel: 0011 64 4 471 0484
Email: nzva@vets.org.nz

www.nzva.org.nz

AVE COORDINATOR

Australian Veterinary Boards Council Inc (AVBC)
Level 8, 470 Collins Street
MELBOURNE VIC 3000
Australia

Tel: 03 9620 7844
Email: ave@avbc.asn.au

www.avbc.asn.au

OET

For information about the OET, please refer to the OET Centre website at:

www.occupationalenglishtest.org

Tel: + 61 3 8658 3963

IELTS

For information about IELTS Academic, please refer to the IELTS website at:

www.ielts.com.au

TOEFL-IBT®

For information about TOEFL-IBT®, please refer to the ETS/TOEFL website at:

<https://www.ets.org/toefl>

PTE ACADEMIC

For information about PTE Academic, please refer to the Pearson PTE Academic website at:

www.pearsonpte.com

Appendix 3: Sample MCQs - AVE Preliminary Examination

Please note that the sample MCQ questions given below are intended to provide candidates with examples of the type of questions and the format used in the MCQ. They do not reflect the degree of difficulty of questions in the exam papers.

The answers to the sample MCQ questions are given on page 45.

PAPER 1: BASE KNOWLEDGE

- In the resting thoroughbred horse, the occurrence of a third heart sound
 - is indicative of asymmetrical ventricular contraction
 - may be a normal physiological event
 - is indicative of synchronous diaphragmatic flutter
 - is indicative of complete heart block
- The resting heart rate of a clinically normal thoroughbred horse in race training is usually within the range of
 - 20 to 40 beats per minute
 - 40 to 60 beats per minute
 - 60 to 80 beats per minute
 - 80 to 100 beats per minute
- Which one of the following abnormalities produces a systolic murmur?
 - mitral valve stenosis
 - aortic valve insufficiency
 - mitral valve insufficiency
 - tricuspid valve stenosis
- Which one of the following nutritional states has been associated causatively with post-parturient haemoglobinuria in cattle?
 - phosphorus deficiency
 - calcium deficiency
 - vitamin C deficiency
 - zinc deficiency

Appendix 3

5. Which one of the following physical factors, when applied to animals during pregnancy, is known to cause congenital defects?
 - A high altitude
 - B severe cold
 - C high temperatures
 - D exposure to high levels of ultraviolet irradiation

6. There is evidence that arthrogryposis in cattle is caused by
 - A *Brucella abortus* infection
 - B manganese deficiency in late pregnancy
 - C lupin poisoning after 90th day of gestation
 - D Akabane virus infection

7. Which one of the following methods of diagnosis would you use to identify cases of ovine brucellosis in rams if only one method was permitted?
 - A palpation of the scrotum and contents
 - B cytological examination of semen
 - C bacterial examination of semen
 - D complement fixation test

8. Long distance spread of the infective agent down-wind, without the assistance of insect vectors, is characteristic of
 - A contagious bovine pleuropneumonia
 - B foot and mouth disease
 - C African Horse Sickness
 - D Mycotic dermatitis (*Dermatophilus congolensis*)

9. It is generally regarded that the minimum time to allow a dairy calf to stay with its dam to ensure a passive transfer of antibodies in the colostrum is which one of the following
 - A 2 hours
 - B 12 hours
 - C 2 weeks
 - D 2 months

Appendix 3

10. The combination of results likely to be found in rumen overload is
- A high rumen pH and high plasma P
 - B low plasma P and low packed cell volume
 - C low rumen pH and high plasma Na
 - D low rumen pH and high plasma lactate
11. Autopsy findings of uniformly pale, slightly swollen kidneys of normal consistency would be most consistent with
- A interstitial nephritis
 - B pyelonephritis
 - C nephrosis
 - D renal neoplasm
12. The primary pathological lesion produced by *Brucella ovis* infection in rams is
- A seminal vesiculitis
 - B epididymitis
 - C orchitis
 - D balanoposthitis
13. Severe inflammation of hair follicles resulting in alopecia, crust formation and secondary infections in the dog, is characteristic of
- A dermatophilus infection
 - B demodex infestation
 - C sarcoptic mange
 - D hyperadrenocorticism (Cushing's Syndrome)
14. The most important method of spread of *Brucella abortus* among cattle is
- A ingestion
 - B passive venereal transfer
 - C placental
 - D respiratory

PAPER 2: CLINICAL REASONING

1. As abattoir post-slaughter inspection veterinarian, you find irregularly-distributed small dark red foci up to 10mm diameter on capsular and cut surfaces of the liver of a prime heavy feedlot steer that seemed normal at pre-slaughter inspection. The larger of these foci have a spongy texture on section and are slightly sunken below the level of adjacent apparently normal parenchyma. Your provisional gross diagnosis is hepatic telangiectasis. The most appropriate action for you to take would be
 - A to pass this liver and the rest of the carcass for human consumption since the lesion is not considered to represent any hazard to human health.
 - B to downgrade this liver to processing grade (for sausage and other processed product) on aesthetic grounds and pass the rest of the carcass for human consumption.
 - C to condemn the liver and submit samples of it for laboratory testing for pathogens, and hold the carcass in the chiller pending receipt of results.
 - D to condemn the liver and the rest of the carcass because these haemorrhagic lesions suggest that the animal was septicæmic before slaughter.

2. During the past week 10 deaths have occurred in 3 adjacent pens (25 cattle in each) in a feedlot. Most animals have died after becoming unable to rise; some have simply been found dead. Recumbent cattle are aware of their surroundings and try to rise when prodded. You perform necropsies on two carcasses but find no specific abnormalities. To help manage the situation, your FIRST action should be
 - A to take blood samples (into EDTA and heparin tubes) from all recumbent animals for laboratory examination.
 - B to secure samples of drinking water for testing for toxins; in particular botulinum and lead.
 - C to isolate the feed that was last delivered to these pens, and examine it for decaying animal matter.
 - D to take rectal temperatures of a representative sample of cattle in the 3 pens to check for the presence of ephemeral fever

3. Two dozen one day-old chicks were purchased to add to a back-yard poultry flock. You are consulted because at least seven of the birds, now a week old, aren't eating, are depressed and are showing intermittent rapid fine tremors of wings and head. Your most appropriate action would be to
 - A immediately add a soluble multivitamin supplement to the drinking water, since the signs are pathognomonic for riboflavin deficiency.
 - B immediately increase the temperature of the brooder, because the birds are having to shiver to keep warm.
 - C immediately quarantine affected birds in a separate building and add soluble antibiotics to the drinking water of the entire flock.
 - D immediately quarantine the entire flock and submit a couple of the worst-affected birds to a state government diagnostic laboratory.

Appendix 3

4. A single grower pig in a housed pen of 25 animals is found dead, having shown no clinical abnormalities beforehand.



The carcass is well-grown. Which of the following conditions is most likely to have been the cause of death?

- A Mulberry heart disease
 - B Encephalomyocarditis virus infection
 - C Clostridial enterotoxaemia
 - D Glasser's disease ((Haemophilus sp. infection)
5. A horse presents with a wound over the dorsal metacarpus. The horse "knuckles over" at the fetlock joint when walking and stands with the fetlock flexed.

The most likely structures affected include

- A superficial flexor tendon
- B common and lateral digital extensor tendon
- C fetlock joint capsule
- D deep flexor tendon

Appendix 3

6. A 2-year-old Quarterhorse presents with bilateral effusion of the tibiotarsal joint. The horse is not lame and is not lame after hock flexion.

What is the most likely diagnosis?

- A Bone spavin of the distal hock joints
 - B Osteochondrosis of the distal intermediate ridge
 - C Osteoarthritis of the tibiotarsal joint
 - D Bilateral idiopathic joint effusion
7. A ten-year-old Yorkshire terrier has had a cough that has been present for 2 weeks. The cough is worse at night and the dog has some mild exercise intolerance. On examination there is a Grade 3 mitral valve murmur and a heart rate of approximately 140. There are no crackles or abnormal respiratory sounds heard. Which one of the following statements is MOST appropriate for this dog?
- A This dog definitely has CHF and would benefit from furosemide therapy.
 - B The absence of respiratory abnormalities rules out pulmonary disease.
 - C This dog may have concurrent pulmonary and cardiac disease.
 - D Echocardiography is the only diagnostic test necessary to establish a definitive diagnosis.

Appendix 4: Clinical Skills Check List

Note these are the minimum hands on procedures that candidates will be expected to perform. Refer to the "Information for AVE Candidates" booklet for a detailed list of competences that candidates may be examined on.

Competency	Times performed (approx.) unsupervised	Times performed (approx.) supervised
Per rectum pregnancy diagnosis in the cow		
Pass a stomach tube in a cow		
Restrain a cow with a halter and perform an intravenous injection		
Collect a blood sample from the tail vein of a cow		
Administer epidural anaesthesia in a cow		
Restrain a cow's front or back leg using a rope		
Catch a sheep and tip correctly to examine the feet		
Take the rectal temperature of a sheep		
Examine the mouth and teeth of a sheep		
Examine the feet of a sheep for signs of footrot		
Take a faecal sample from a sheep		
Perform a physical examination of the testes of a ram		
Catch and apply a halter to a horse		
Take temperature, pulse and respiration in a horse		
Apply a twitch or Hausmann gag to a horse		
Examine a horse's mouth and teeth		
Clinically examine the eye of a horse with an ophthalmoscope		
Pick up a horse's leg and examine the hoof		
Use hoof testers to test for a pain response in a horse		
Complete an ID certificate for a horse		
Clinical examination of a dog		
Premedicate and administer general anaesthesia in a dog		
Perform an ovariohysterectomy or cystotomy on a dog		
Name (please print)		
Signed		Date

Appendix 5: Rules of Conduct for the AVE

RULES OF CONDUCT FOR THE AUSTRALASIAN VETERINARY EXAMINATION

OVERVIEW

The Australasian Veterinary Examination Committee (AVEC) is committed to preserving the integrity and security of the Australasian Veterinary Examination (AVE).

Prior to embarking on the AVE, candidates must read and understand the Rules of Conduct in this section and pertaining to the Preliminary Examination (MCQ) and the Final (clinical) Examination.

Candidates should understand that AVEC may or may not require a candidate to re-take any stage of the AVE if presented with sufficient evidence that the security of the examination has been compromised, notwithstanding the absence of any evidence of a candidate's personal involvement in such activities.

If a candidate breaches the Rules of Conduct or engages in any form of irregular behavior, AVEC may terminate the candidate's participation in an examination, invalidate the results of an examination, withhold or revoke the candidate's scores or certification, bar the candidate from participating in future examinations, and/or take other appropriate action.

Irregular behaviour consists of any action by candidates or others that subverts or attempts to subvert the examination process, including without limitation:

- Falsification of information on the application form, including additional documentation, or failure to provide AVEC with information material to the application;
- Impersonating an examinee or engaging someone else to take the examination who is not the candidate;
- Giving, receiving or obtaining unauthorized assistance during the exam, or attempting to do so
- Unauthorized possession, reproduction or disclosure of any materials, including, but not limited to, examination questions before, during or after the examination;
- Making notes of any kind during an examination except on the writing materials provided by AVEC for that purpose;
- Disruptive or unprofessional behaviour at an AVE venue or site;
- Offering any benefit to an AVE test centre administrator or agent of the AVE in return for any right, privilege or benefit which is not usually granted by AVEC to other similarly situated candidates.

Candidates deemed to have violated the Rules of Conduct or otherwise engaged in irregular behaviour may appeal the decision within the guidelines of the Appeals document.

RULES OF CONDUCT FOR THE PRELIMINARY EXAMINATION (MCQ)

By applying to take the Preliminary Examination (MCQ) a candidate agrees to the following:

- To abide by the Professional Examination Rules (which will be distributed with the venue notices) as detailed by Excel Psychological and Educational Consultancy Pty Ltd (EPEC). EPEC conduct the AVE in partnership with venue provider Cliffons on behalf of AVEC.
- To have read and understood the overview.
- To have read and understood the section on irregular behaviour in the overview.
- To have understood and acknowledge that all examination materials remain the property of AVEC and you will maintain the confidentiality of the examination content of the MCQ.
- To not reproduce or attempt to reproduce examination materials through memorization or any other means, nor will you provide information relating to examination content that may give or attempt to give unfair advantage to individuals who may be taking the examination, including without limitation, by posting information regarding examination content on the internet.

Appendix 5

RULES OF CONDUCT FOR THE FINAL (CLINICAL) EXAMINATION

AVEC has established rules of conduct to ensure that no examinee or group of examinees receives unfair advantage during the examination, inadvertently or otherwise.

If there is reason to believe that the integrity of the examination process is jeopardized, AVEC may invalidate all or any part of an AVE Final (clinical) administration. If information indicates that continued testing would jeopardize the security of examinations materials or the integrity of scores, AVEC reserves the right to suspend or cancel any AVE Final (clinical) administration.

By applying to take the AVE Final (clinical) examination a candidate agrees to the following:

- You are the person named on the clinical application form.
- You will not bring personal belongings including mobile phones, watches with memory capability, pagers, personal digital assistants (PDA's), formulas, study materials, notes, papers, purses or wallets into the examination rooms or testing areas.
- You will not give, receive or obtain any form of unauthorized assistance during the examination session, including breaks.
- You will not remove materials in any form (written, printed, recorded or any other type) from the testing area unless instructed to do so by the examiners.
- You understand and acknowledge that all examination materials remain the property of AVEC and you will maintain the confidentiality of the case content for all sections of the clinical examination.
- You will not reproduce or attempt to reproduce examination materials through memorization or any other means, nor will you provide information relating to examination content that may give or attempt to give unfair advantage to individuals who may be taking the examination, including without limitation, by posting information regarding examination content on the internet.
- You understand that Observers may be present during examination sessions.
- You understand that examination sessions may be recorded and archived.

Should a candidate have concerns regarding the clinical examination testing sessions, he/she may notify the Chief Examiner or Chair, AVEC at the examination site on the examination days. Otherwise he/she can notify AVEC in writing within 28 days of the conclusion of the clinical examination. Concerns will be investigated within the guidelines of the Appeals document.

Answers to sample MCQ questions in Appendix 3

ANSWERS TO SAMPLE MCQ QUESTIONS

PAPER 1: BASE KNOWLEDGE

1. B
2. A
3. C
4. A
5. C
6. D
7. D
8. B
9. B
10. D
11. C
12. B
13. B
14. A

PAPER 2: CLINICAL REASONING

1. B
2. C
3. D
4. A
5. B
6. B
7. C



**Australasian Veterinary
Boards Council Inc.**

No. A00390074L
ABN 49 337 540 469

Level 8, 470 Collins Street
Melbourne Vic 3000
Tel: +61 3 9620 7844
www.avbc.asn.au