

# **ECEIM 2018 exam Hannover, Germany**

- Updated July 2017

## **Information for candidates taking the ECEIM general and certifying examinations in 2018**

This document contains information to help you prepare for the ECEIM general and certifying examinations.

For additional information please see the ECEIM website. If you encounter any problems contact the exam committee chairperson, Gaby van Galen (Tel +45 (0) 61 46 30 36, e-mail: [gaby@equinespecialists.eu](mailto:gaby@equinespecialists.eu)) using the subject heading: EXAM CANDIDATE 2018

### **Examination location and dates**

#### *Location:*

University of Veterinary Medicine Hannover, Bünteweg 2, 30559 Hannover, Germany.

Details of location, travel, and suggested accommodation will be forwarded to candidates after their application to sit the examination has been accepted.

#### *Proposed schedule of the examination:*

Note that these details will be confirmed after you receive notification of whether your application has been successful.

Wedn. 31<sup>st</sup> January 2018:

08H30 – 12H00      Certifying ESSAY

14H00 – 17H30      Certifying MCQ paper

Thurs 1<sup>st</sup> February 2018:

09H00 – 12H30      General paper 1

13H30 – 17H00      General paper 2

Friday 2<sup>nd</sup> February 2018:

Objective Case Management, with individual candidate times to be allocated.

Important notes:

- (1) The order of the examination is similar as last year, so that the ESSAY paper will be examined first, followed by the Certifying Multiple Choice Question paper. This change has been made in 2017 to allow marking and assessment of the overall examination to be completed more rapidly.
- (2) **Due to the nature of this examination, each section will be administered at one time and place ONLY. There will be no alternative arrangements for any reason.**

## **Structure of the examinations**

### **General examination (1<sup>st</sup> February)**

General paper 1 will comprise 50 multiple choice questions (MCQ). The aim of these is to test candidates' knowledge and understanding of concepts relating to the medical and biological sciences that underpin clinical practice of internal medicine (for example pharmacology, microbiology, physiology, pathology, epidemiology, diagnostic imaging). General paper 2 will also comprise 50 MCQ, and is aimed to test candidates' clinical knowledge and ability to address specific clinical problems. The blueprint below documents how many MCQs will be assigned to specific body systems and spheres of knowledge within the examination.

The examination will be conducted in 2 sections each lasting 3.5 hours, allowing up to 4.2 minutes per question. Candidates will be allowed to take a non-medical English language dictionary into the examination. Candidates will be encouraged to provide feedback on specific questions in particular to identify any difficulties in comprehension they have encountered and these comments will be considered in the examination assessment process.

The multiple choice question papers will be presented in an electronic format with answers to be entered directly on the computer provided.

### **Certifying examination**

This will consist of 3 sections:

#### **1. Essay Section (31<sup>st</sup> January)**

Candidates will be required to answer 2 compulsory essay questions over a period of 3.5 hours. Each essay will comprise multiple shorter questions on a common topic. Candidates will be allowed to take a non-medical English language dictionary into the examination. Essays must be typed using basic word processing software for essay writing (Word for Windows). QWERTY, QWERTZ and AZERTY keyboards will be provided, but the exam committee cannot be held responsible for any failure of computer/keyboard incompatibility. Candidates should therefore be prepared that they may have to type using QWERTZ keyboards only.

Candidates should note that the examination committee believes that typed essays are an advantage to the candidate, preventing problems with assessment of illegible handwriting.

See website for examples of previous essay questions.

#### **2. Certifying Multiple Choice Paper (31<sup>st</sup> January)**

This paper comprises 50 MCQ aimed to test candidates' ability to address clinical problems. Particular emphasis will be given to candidates' ability to demonstrate clinical judgement when presented with a case scenario. A maximum of 3.5 hours is allowed for the examination, averaging 4.2 minutes per question. Candidates will be allowed to take a non-medical English language dictionary into the examination. Candidates will be encouraged to provide feedback on specific questions in particular to identify any difficulties in comprehension they have encountered and these comments will be considered in the examination assessment process. The multiple choice question papers will be presented in an electronic format with answers to be entered directly on the computer provided.

### **3. Objective case management (OCM) section (2<sup>nd</sup> February)**

Candidates will be given clinical information on 2 cases and given 1 hour to review this information. To ensure that the examination is consistent all candidates will be presented with the same cases. For each case, candidates will be given a list of questions to prepare and to present during the exam. A comprehensive table of laboratory reference ranges will be provided to all candidates. Following this preparation, the candidate will be examined orally by two different teams of 2 examiners, and this in two different rooms (one for case 1 and one for case 2). For every case, one examiner will lead the discussion while the other (or both) documents the candidates' answers. During the examination, the candidate will be asked the questions that were prepared during the preparation time, and further structured questions regarding interpretation of the clinical and laboratory data, disease pathogenesis, further diagnostic techniques, case management and prognosis. This section of the examination will be completed in 60 minutes (30 minutes per case). The OCM session which will be recorded on videotape; a copy of this recording will be retained by the Examination Committee for review in the event that the candidate lodges an appeal against the Examination Committee's decision.

To prevent unfair discussion of the examination, candidates will be segregated for this component of the examination until all have finished the OCM examination. Candidates should anticipate having to spend several hours in a secure area, and may bring food and books or other items to fill the time. Please note that use of electronic devices with the potential to go online will not be permitted. Refreshments will be provided. See the website for examples of previous OCM questions and grading forms.

#### Language

The exam will be conducted in English. Candidates who are not native English speakers have the option of having a translator fluent in their own language attend the examination. If you

would prefer to have a translator present then please indicate this on application for the examination.

## HOW THE EXAMINATION IS SCORED:

In any given year it is possible for all candidates to pass the examination. Cut-off standards for passing the examination are determined by Diplomates who rate the examination, and are not based on a predetermined proportion of the candidate population passing or failing. The rating process is designed to ensure that at least the minimum level of competence required for specialist status is achieved by those passing the examination.

Candidates must pass both the general and certifying examination in order to be considered eligible to become Diplomates of the College (see ECEIM constitution). Candidates who fail the General examination have to re-sit both MCQ papers of the general examination. As described in the constitution of ECEIM, candidates that fail only one section of the Certifying Exam can re-take that section individually. Candidates that fail individual components of the Examination must retake only the failed components, however, candidates must re-take all the papers they have not yet passed **each time** they attempt to complete the examination. All parts must be completed within **8 years** of the initial application. The maximum number of **reapplications** to sit parts or all of the examination is **3**. This applies to candidates who sit all parts of the examination at once as well as to candidates of category 1a, who sit the General examination already during their residency before taking the Certifying examination.

**General Examination:** marks from papers 1 and 2 will be combined to produce one final mark. The MCQs are set and evaluated by Diplomates of ECEIM and by colleagues who are Diplomates in related disciplines or from outside of Europe. A process of rating and evaluation of validity by Diplomates of ECEIM will determine the pass grade.

**Certifying Examination:** candidates must achieve a pass mark in each of the 3 sections.

- **Multiple Choice Questions:** these are set and evaluated by Diplomates of ECEIM and by colleagues who are Diplomates in related disciplines or from outside of Europe. A process of rating and evaluation of validity by Diplomates of ECEIM determines the pass point.
- **Essay:** each essay is independently graded by at least 2 members of the examination board, who have participated in the construction of an optimal essay response. The two independent grades are averaged. Marks from the two essays will be combined to produce one final essay mark. Failing or borderline answers will be reviewed by the Examination Committee prior to a final decision.
- **Objective Case Management:** The candidate will be expected to answer a predefined series of objective questions relating to disease aetiopathogenesis, and diagnostic and therapeutic plans, based on the case material provided. All candidates will be asked the same series of questions, in the same predetermined order. The examiners' aim is to reach the same point with each individual candidate but this also is dependent on

the rate of candidate's response. Questions will be marked objectively according to a predetermined marking scheme.

**Appeals:** for details of the Appeals process, see the ECEIM constitution.

## BLUEPRINT FOR MCQ SECTIONS

<b>SYSTEM/ SPHERE OF KNOWLEDGE</b>	<b>GENERAL 1 BIOLOGICAL &amp; M E D I C A L SCIENCES</b>	<b>GENERAL 2 C L I N I C A L SCIENCES</b>	<b>CERTIFYING C L I N I C A L PROBLEMS</b>
Behaviour	2	-	-
Cardiovascular	2	3	3
Clinical Pathology*	3	-	-
Critical Care & emergency medicine	-	3	3
Dermatology	2	3	3
Diagnostic Imaging*	2	-	-
Epidemiology and medical statistics*	4	-	-
Endocrinology, metabolic & hepatic	3	4	4
Exercise Physiology & sports medicine	2	-	3
Fluid, electrolyte and acid-base balance	-	3	3
Gastrointestinal	3	7	7
Genetics & molecular biology*	4	-	-
Haemolymphatic		4	3
Immunology*	3	-	-
Infectious disease & microbiology*	5	3	1
Neurology, neuromuscular, & musculoskeletal	1	4	3
Nutrition*	3	-	-
Ophthalmology		3	3
Parasitology*	3		1
Perinatology*		3	3
Pharmacology & toxicology*	4	-	-
Respiratory	3	7	7
Urinary	1	3	3
<b>Total</b>	<b>50</b>	<b>50</b>	<b>50</b>

\* Elements of these disciplines will be incorporated into the clinical questions and problems relating to the various body systems.



## COMMENTS AND EXAMPLES OF QUESTION FORMATS

### Multiple Choice Questions

The MCQs are designed to test knowledge, synthesis of information and clinical judgement. Clearly the realities of practice dictate that the selection of diagnostic tests and treatments is often constrained by financial considerations but, for the purposes of this examination, candidates are encouraged to select their answer on the basis of best medical practice and to assume that there are no specific financial constraints unless mentioned within individual questions. Questions on exotic diseases or important diseases which occur only in certain parts of Europe will be included however, in selecting questions, the examination board will ensure that there is no geographic bias and thus, diseases which do not occur within some areas of Europe will not be given undue prominence within the examination. Candidates who are experiencing difficulties related to language during the examination are encouraged to seek assistance from the invigilators. Candidates will also be given the opportunity to comment on the questions, particularly if they feel that the language is difficult, or the options for answers are ambiguous.

All MCQs will be of single best answer format with 3 distractors (incorrect or less good options). This means that you must select the **one option** that you consider the **best answer** to the question. The distractors are likely to be options that are not necessarily completely wrong but the correct answer will be one that the majority of evidence or opinion in the current literature supports. For example, if you are asked “If antimicrobial therapy is to be used, which of the following drugs is considered the most appropriate for treating *Strep. equi equi* infection?” with the options of: penicillin, trimethoprim sulphonamide, ticarcillin or oxytetracycline? Notice that *Strep. equi equi* can be sensitive to all of these drugs but penicillin is the correct answer. Of the options given, it is recommended by most (probably all) current texts, although there are clinical circumstances in which one would conceivably choose to use one of the other options (for example if your case was known to be allergic to penicillin, or there were practical difficulties over arranging intramuscular injection etc). Equally, when presented with that question, you may feel that you want to make an argument that you would not use antimicrobials in a case of Strangles, however this specific MCQ does not address that issue therefore that argument, while perfectly valid in general terms, is not relevant to this specific MCQ question.

Examples of MCQ typical of those that will be included in each of the 3 MCQ papers (i.e. General 1: Medical and Biological Sciences, General 2: Clinical Sciences and Certifying: Clinical Problems) are given below.

### Essay Section

Essays will cover topics relating to the pathophysiology of disease, disease treatment and prevention, diagnostic tests, drug therapy and other contemporary internal medicine topics. Essay questions will be constructed in a series of linked short answer questions, some of which may request the production of a list, table or diagram. Candidates will be asked to write **2 essays** in a period of 3.5 hours.

Candidates are advised to spend equal quantities of time on the completion of each essay.

### Objective Case Management Section

This section of the examination is designed to test the clinical competency of the candidate. Specific recommendations for preparation cannot be made beyond the clinical experience gained from participation in a residency program. You will be given time to review the case material before the exam begins: the examiners will then expect you to answer a series of pre-determined objective questions.

## EXAMPLES OF QUESTION FORMATS

### Examples of Multiple Choice Questions (MCQ) suitable for General Section 1:

#### QUESTION

Regarding the pathophysiology of neuromuscular disease, which one of the following statements is correct?

#### ANSWERS & DISTRACTORS

- A. Botulinum and tetanus neurotoxins block the action of acetylcholinesterase at the synapse.
- B. Botulinum and tetanus neurotoxins increase the action of acetylcholinesterase at the synapse.
- C. Botulinum neurotoxin augments the action of acetylcholinesterase at the synapse, while tetanus neurotoxin blocks the activity of acetylcholinesterase at the synapse.
- D. Botulinum and tetanus neurotoxins inhibit exocytosis of neurotransmitters from presynaptic nerve terminals.

CORRECT ANSWER C

#### QUESTION

Regarding gastric physiology, which of the following statements is correct?

#### ANSWERS & DISTRACTORS

- A. There is no physiological reflux of duodenal content into the stomach in healthy horses.
- B. The physiological reflux of duodenal content to the stomach can have a strong influence on the pH of the gastric content in healthy horses.
- C. The physiological reflux of duodenal content to the stomach has a minor influence on the pH of the gastric content in healthy horses.
- D. The physiological reflux of duodenal content to the stomach has no influence on the pH of the gastric content in healthy horses.

CORRECT ANSWER B

#### QUESTION

When infused intravenously in healthy horses at a dose that does not influence systemic arterial pressure and heart rate, phenylethylamine causes:

#### ANSWERS & DISTRACTORS

- A. an increase in digital arterial blood flow and in plasma 5-hydroxytryptamine concentration.
- B. a decrease in digital arterial blood flow and in plasma 5-hydroxytryptamine concentration.
- C. an increase in digital arterial blood flow and a decrease in plasma 5-hydroxytryptamine concentration.
- D. a decrease in digital arterial blood flow and an increase in plasma 5-hydroxytryptamine concentration.

CORRECT ANSWER D

### Example of MCQ suitable for General Paper 2

#### QUESTION

Which of the following sets of laboratory data would you expect to find in a horse that has a mass causing obstruction of the common bile duct?

#### ANSWERS & DISTRACTORS

	PCV (l/l)	Serum haemoglobin (g/dl)	Serum tot B i l i r u b i n ( $\mu$ mol/l)	Serum direct b i l i r u b i n ( $\mu$ mol/l)	Urine bilirubin	Urine urobilinogen
A	0.27	9	100	80	+	-
B	0.32	10.6	40	4	-	-

C	0.32	10.6	100	4	-	+
D	0.27	9	160	80	+	-

CORRECT ANSWER D

## Example of an MCQ suitable for Certifying Exam (clinical problem-solving)

### QUESTION

You attend a 4-year-old Thoroughbred broodmare, shortly after her return from a stud farm in Normandy (France). The owner reports anorexia and depression and a rectal temperature of 40.2°C. Initially, he suspected transport-stress and over the next two to three days, the fever remained high and the mare also started to cough.

Your clinical examination reveals nasal discharge, rhinitis, conjunctivitis, peri- and supra-orbital oedema, and limb oedema. There is leukopaenia and lymphopaenia.

You plan to submit samples for laboratory testing. Which one of the following viruses do you consider the **most likely differential diagnosis**?

### ANSWERS & DISTRACTORS

- A. Equine Influenza
- B. Equine Herpesvirus 1
- C. Equine Viral Arteritis
- D. Equine Rhinovirus

CORRECT ANSWER C

### Examples of Essay in Certifying Exam:

See website for examples of previous essay questions

### Example of an Objective Case Management (OCM) question and grading form in Certifying Examination

See website for examples of previous OCM questions

### GENERAL COMMENTS ON EXAM PREPARATION.

The entire examination will emphasize information taken from the current veterinary literature. Selected information will also be taken from the current human and general biomedical literature. With respect to the veterinary literature, current veterinary textbooks and papers published in refereed journals should be the primary study area. Candidates are advised to prepare for the examination by a systematic review of recent textbooks and periodicals. Your mentors can help you select appropriate study material. WE CANNOT DEFINE CONCLUSIVELY THE BODY OF KNOWLEDGE NECESSARY TO PASS THIS EXAMINATION – the following list is **ONLY A GUIDELINE**.

#### Textbooks

Equine Internal Medicine (Reed, Bayly, Sellon)

Equine Medicine and Surgery (Merritt, Moore, Mayhew et al)  
Current Therapy in Equine Medicine 1 – 6 (Robinson)  
Large Animal Internal Medicine (Smith)  
Equine Sports Medicine and Surgery (Hinchcliff et al)  
Clinical Biochemistry of Domestic Animals (Kaneko)  
A current textbook in physiology (e.g. Guyton and Hall or Ganong)  
Clinical Physiology of Acid-base and electrolyte disorders  
A current textbook in immunology (e.g. Roitt or Tizard)  
Large Animal Neurology (Mayhew)  
Veterinary neuroanatomy and clinical neurology (DeLahunta)  
The Pharmacological basis of Therapeutics (Goodman and Gilman)  
Veterinary Drug Handbook (Plumb)  
Respiratory Physiology (West)  
Veterinary Laboratory Medicine (Duncan, Prasse, Mahaffey)  
Veterinary Clinical Epidemiology (Smith), or Veterinary Epidemiology (Thrusfield)  
Equine Diagnostic Ultrasound (Reef)  
Manual of Equine Gastroenterology (Mair, Divers Ducharme)  
Equine Respiratory Medicine and Surgery (McGorum, Dixon, Robinson, Schumacher)  
Equine Emergencies (Orsini and Divers)  
Equine Infectious Diseases (Sellon and Long)  
Equine Neonatal Medicine (Paradis)  
Equine Neurology (Reed and Furr)  
Diagnostic Techniques in Equine Medicine (Taylor, Brazil and Hillyer)  
The Equine Hospital Manual (Corley and Stephen)  
Color Atlas of Diseases and Disorders of the Foal (McAuliffe and Slovis)

### **Journals**

Journal of Veterinary Internal Medicine  
Equine Veterinary Journal  
Journal of the American Veterinary Medical Association  
American Journal of Veterinary Research  
Compendium of Continuing Education for the practising veterinarian

Veterinary Clinics of North America

Equine Veterinary Education

New England Journal of Medicine (major review articles)

Veterinary Record

Veterinary Journal

ACVIM and AAEP Proceedings (recent years)

Recent publications on relevant topics of equine internal medicine listed in NCBI/Pubmed

All equine ACVIM and ECEIM consensus statements