

AFOEM Annual Training Meeting
Friday, 3 May to Sunday, 5 May 2019
Auckland, New Zealand



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Australasian Faculty of
Occupational and Environmental Medicine

The specialist work doctors

Stage A Exam

Stage A and B Examinations Overview

Eligibility to take part in Stage A and B Examinations

Candidates are eligible to undertake summative assessments if, by the closing date, they:

- are eligible for certification of the preceding six month training period as indicated by the timely submission of learning plans (including self-evaluation), formative assessments and Training Status Reports approved by the Educational Supervisor and TPD
- have submitted an appropriate application form where necessary before the applications closing date. It is the responsibility of the candidate to ensure that the application is lodged by the due date; no application will be accepted after this date
- are fully financial.

Trainees may attempt either or both of the Stage B Written and Practical Examinations in any year or order, subject to meeting the above eligibility requirements. However, any trainee who has entered the program at Stage A must complete that stage before attempting the summative assessments for Stage B.

Exam Attempt Limit

For trainees who commenced training before 2019

Trainees who are unable to complete the Stage A or Stage B Examinations within 5 attempts at each are not eligible to continue in training.

For trainees who commenced training from 2019 onwards

Trainees who are unable to complete the Stage A or Stage B Examinations within 3 attempts at each are not eligible to continue in training.

Stage A – Written Examination

Purpose

To determine whether a trainee's knowledge in basic medicine and medical sciences is of the required level for progression to Stage B training. This is a summative assessment.

Requirement

Successful completion of Stage A written examination before progressing to Stage B

Eligibility

Trainees must meet the following criteria:

- be a Stage A trainee of the OEM training program
- have an Educational Supervisor
- have completed an ALS course and provided the RACP with certificate of completion. Submission of certified evidence of completion is required prior to trainees attempting the examinations for Stage A
- be currently registered and approved for the training term
- have certification of the most recent training period, i.e. all teaching and learning activities and formative assessments completed
- have completed a minimum of six months of active certified Stage A training (one training period)
- be fully current with all College training fees. Trainees with outstanding training fees will not be eligible to sit the Stage A Written Examination unless they have made an application in writing to the Honorary Treasurer requesting special consideration.

More information

- [Download the Occupational and Environmental Medicine Training Curriculum](#) for learning objectives that refer to Stage A.
- Consult the Exams information and Candidate Instructions Manual on the College website.
- AFOEM Examinations page of the College website.

When is the examination?

Stage A and Stage B

Applications open:	Monday 24 June 2019
Applications close:	Friday 5 July 2019
Stage A exam held:	Saturday 7 September 2019
Stage B exam held:	Saturday 7 – Sunday 8 September 2019
Exam results:	Thursday 17 October 2019

How is the examination structured?

The Stage A Written Examination is a one three-hour paper consisting of approximately 120 multiple choice questions (MCQ).

Examination content

The examination content is based on the AFOEM training curriculum.

- Domain 10: Clinical practice (50 – 60% of total questions)
- Domain 60: Professional qualities (20 – 25%)
- Domain 30: Critical appraisal of information (10 – 12%)
- Domain 20: Workplace hazard assessment – only Theme 20.1 (7 – 10%)

[View the Occupational and Environmental Medicine curriculum](#)

[View a list of learning objectives for the examination \(PDF 53KB\)](#)



The Royal Australasian
College of Physicians

Occupational and Environmental Medicine Training Curriculum

*Australasian Faculty of
Occupational and Environmental Medicine*



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Stage A, The basics concerns particularly:

- clinical skills expected of a medical practitioner at completion of post-graduate year two (PGY2)
- well-developed skills at critical appraisal of general medical literature
- professional qualities of communication, patient safety, cultural competence, ethics, and clinical decision making
- limited knowledge of basic physics, chemistry and microbiology
- specified knowledge of anatomy, pathophysiology and pharmacology
- specified knowledge of methods of clinical investigation and treatment.

LEARNING OBJECTIVE TABLES

DOMAIN 10	CLINICAL PRACTICE	50-60% of questions
Sub-domain 11	Clinical Process	
Theme 11.1	Clinical Skills	
Learning Objective		
11.1.1	Elicit the history and obtain other relevant data	STAGE A
11.1.2	Conduct an appropriate physical examination	STAGE A
11.1.3	Synthesise findings from history and physical examination to develop a differential diagnosis and management plan	STAGE A
11.1.4	Plan and arrange investigations appropriately	STAGE A
11.1.5	Take, record, and analyse an occupational and environmental history from an individual	STAGE B
11.1.6	Assess what has been gained from a clinical encounter, form an opinion, and decide the options of what to do next	STAGE B
Theme 11.2	Patient Care and Therapeutics	
Learning Objective		
11.2.1	Manage general care in the unwell patient	STAGE A
11.2.2	Prescribe appropriate and safe pharmacotherapy	STAGE A
11.2.3	Incorporate health and wellness promotion in clinical practice	STAGE A
11.2.4	Manage patients with surgical problems	STAGE A

12.6.8	Manage renal and urinary disorders that affect or are affected by occupation or environment	STAGE B
12.6.9	Manage conditions of the blood-forming or immune systems that affect or are affected by occupation or environment	STAGE B
12.6.10	Manage conditions of the endocrine or gastroenterological systems that affect or are affected by occupation or environment	STAGE B
12.6.11	Manage reproductive issues that affect or are affected by occupation or environment	STAGE B
12.6.12	Assess and manage specific toxicities relating to occupation or environment	STAGE B
DOMAIN 20	WORKPLACE HAZARD ASSESSMENT	7-10% of questions
Theme 20.1	Properties and Mechanisms of Harm of Agents that can Affect Health	
Learning Objective		
20.1.1	Describe the properties of physical agents that can affect health	STAGE A
20.1.2	Describe the chemical properties that are relevant to health	STAGE A
20.1.3	Describe the properties of biological agents that can affect health	STAGE A

DOMAIN 30	CRITICAL APPRAISAL OF INFORMATION	10-12% of questions
Theme 30.1	Finding and Application of Information	
Learning Objective		
30.1.1	Demonstrate understanding of the principles of evidence-based medicine, the limitations of evidence and the challenge of applying research findings to daily clinical practice	STAGE A
Theme 30.2	Clinical Decision Making	
Learning Objective		
30.2.1	Understand and apply the process of diagnostic reasoning	STAGE A
30.2.2	Prognosticate and predict risk	STAGE A
30.2.3	Derive therapeutic decisions which maximise patient benefit and acceptance	STAGE A
30.2.4	Use evidence effectively and efficiently to inform clinical decision making	STAGE A
Theme 30.3	Diagnostic and Screening Tests	
Learning Objective		
30.3.1	Appraise a test in accord with the properties of the test and characteristics of those being tested	STAGE A

DOMAIN 60**PROFESSIONAL QUALITIES**

20-25% of questions

Sub-domain 61**Communication**

In order to provide high-quality care for patients, it is essential that physicians establish and foster effective relationships with patients and their families, other health care professionals, and administrative personnel.

To achieve this they must develop and use the full range of skills related to communication that will enable them to effectively obtain and synthesise information from, and discuss relevant issues with, patients and their families, professional colleagues, administrative personnel and systems as appropriate. These communication skills are characterised by understanding, trust, respect, empathy, and confidentiality. Effective communication skills will also facilitate their ability to research, evaluate, and disseminate information in the broader community.

First encounters can have a profound effect on practice. Therefore it is important to develop effective communication strategies early on in training.

Theme 61.1**Physician-Patient Communication****Learning Objective****61.1.1**

Apply communication skills to engage and reassure the patient in specific situations, including first encounters, history taking, counselling, and breaking bad news

STAGE
A & B**61.1.2**

Empower patients and be respectful of their rights in all aspects of communication

STAGE
A & B**Theme 61.2****Communication with a Third Party, Including the Patient's Employer or Their Family and/or Carers****Learning Objective**

Examples of questions

These examples are drawn from several sources. One published source is *Handbook of multiple choice questions. Canberra: Australian Medical Council 2009.*

Questions drawn from there are marked with an asterisk. This source is chosen, *not* because the questions will be drawn from that book, but because the questions presented here indicate the style and standard that will be required. These example questions are numbered and the answers are provided at the end of this guide.

Sub-domain 11: Clinical process

This sub-domain includes eight learning objectives relevant to the Stage A written examination. They are 11.1.3, 11.1.4, 11.2.1, 11.2.2, 11.2.3, 11.2.4, 11.2.5, 11.3.2. Two examples of questions relevant to this sub-domain are:

- E1. If you are told that for an orally administered drug there is a large first pass clearance, this indicates:
- A. Delayed clearance.
 - B. Much of the drug is removed by the liver before it reaches the systemic circulation.
 - C. The drug has high solubility in water.
 - D. The drug has a small volume of distribution.
 - E. Nearly all of the drug that passes through the glomerulus is reabsorbed from the renal tubules.

- E2. A 60 year old woman is admitted to hospital with generalised peritonitis thought to be due to perforated diverticular disease. A decision is made that she requires urgent surgery. She is on warfarin for atrial fibrillation and her International Normalised Ratio (INR) is 2.5 (normal < 1.1). Which one of the following is the most appropriate action to take prior to operation?
- A. Proceed direct to the planned operation without medication.
 - B. Give vitamin K intravenously and intramuscularly.
 - C. Administer two units of fresh frozen plasma.
 - D. Give protamine sulphate.
 - E. Give epsilon-amino caproic acid (EACA).

Theme 12.1: Management of acute medical problems

Theme 12.2: Management of patients with undifferentiated presentations

These two themes include three learning objectives relevant to the Stage A written examination. They are: 12.1.1, 12.1.2, 12.2.1. An example of a question relevant to these themes is:

- E3. A 60-year old man presents to a hospital Emergency Department after vomiting a large amount of fresh blood. He is normally in good health and apart from some indigestion after meals, he has never had anything like this before. He drinks the equivalent of 30 grams of alcohol per day and is not on any medications. Which one of the following is the most likely cause of the bleeding?
- A. Oesophagitis.
 - B. Gastric ulcer.
 - C. Gastric carcinoma.
 - D. Mallory-Weiss syndrome.
 - E. Duodenal ulcer.

Theme 12.3: Management of patients with disorders of an organ system

This theme includes thirteen learning objectives relevant to the Stage A written examination. They are 12.3.1 through to 12.3.13. Three examples of questions relevant to this theme is:

- E4. A 30-year old man presents to a hospital Emergency Department complaining of a dry cough, fever, dyspnoea and diarrhoea which began three days after the onset of an upper respiratory tract infection. On physical examination, his respiratory rate is 20/minute, temperature 40.5°C and the chest shows bi-basal inspiratory crackles. Chest x-ray shows bilateral interstitial infiltrates. Initial antimicrobial therapy should be which one of the following?
- A. Amoxicillin/clavulanic acid
 - B. Azithromycin.
 - C. Ciprofloxacin.
 - D. High dose trimethoprim-sulphamethoxazole.
 - E. Penicillin.

E5. A 20 year old woman is found to have a blood pressure of 200/120 mmHg. There is left ventricular hypertrophy but her examination is otherwise normal. Urinalysis and microscopy are normal. She is on no medications. Initial blood tests show:

Plasma sodium 136 mmol/L (normal range 135 – 145 mmol/L)

Plasma potassium 2.9 mmol/L (normal range 3.5 – 4.5 mmol/L)

Plasma chloride 100 mmol/L (normal range 95 – 110 mmol/L)

Plasma urea 4.5 mmol/L (normal range 3.0 – 8.0 mmol/L)

Plasma creatinine 0.08 mmol/L (normal range 0.08 – 0.11 mmol/L).

Plasma renin is measured and is found to be elevated.

Which one of the following is the most likely diagnosis?

- A. Essential hypertension.
- B. Diuretic abuse.
- C. Renal artery stenosis.
- D. Conn syndrome.
- E. Pheochromocytosis.

- E6. A 64-year old woman complains of dragging her right foot and of numbness and paraesthesia in that leg. On examination, there is foot-drop, with weakness of dorsiflexion, inversion and eversion of the ankle. The reflexes are normal and there is loss of appreciation of pinprick on the outer side of the lower leg. A lesion of which one of the following nerve roots or nerves is the most likely cause of her presentation?
- A. L4 nerve root.
 - B. L5 nerve root.
 - C. Superficial peroneal nerve.
 - D. Tibial nerve.
 - E. Sciatic nerve.

Theme 12.4: Management of patients with defined disease processes

This theme includes three learning objectives relevant to the Stage A written examination. They are 12.4.1, 12.4.2, 12.4.3. An example of a question relevant to this theme is:

- E7. A 33-year old man presents who returned three weeks after a three-week honeymoon in Thailand. He travelled to country areas and main cities and has presented because of headaches, fever, fatigue and 2 – 3 loose stools daily for the last week.

He was seen by an after-hours doctor who had organised a full blood count, urine microscopy, urea, electrolytes and liver function tests. Apart from a slightly low platelet count, $105 \times 10^9/L$ (normal range $150 - 400 \times 10^9/L$), and mildly raised liver enzymes ($< 1.5 \times$ normal), the remaining test results were normal. He is not sure about his vaccination status. He had taken doxycycline most of the days while away, and stopped this a week ago. On examination, he looks unwell, has a temperature of $38^{\circ}C$, his throat is congested and he has vague epigastric tenderness. Which one of the following conditions is the most important to exclude by a further diagnostic test?

- A. Plasmodium falciparum malaria
- B. Plasmodium vivax malaria
- C. Hepatitis A
- D. Infectious mononucleosis
- E. Enteric fever

Theme 12.5: Medicine through the lifespan – growth and development

This theme includes four learning objectives relevant to the Stage A written examination. They are 12.5.1, 12.5.2, 12.5.3, 12.5.4. An example of a question relevant to this theme is:

- E8. A 50-year old woman whose last menstrual period occurred at the age of 49 years, had an episode of vaginal bleeding of three days' duration, two weeks ago. Just prior to the bleeding, she had noticed a reduction in the extent of her hot flushes and some breast enlargement. Which one of the following is the most likely cause of this bleeding?
- A. Carcinoma of the cervix
 - B. Carcinoma of the endometrium
 - C. Atrophic vaginitis
 - D. An episode of ovarian follicular activity
 - E. Cystic endometrial hyperplasia

Theme 20.1: Properties and mechanisms of harm of agents that can affect health

This theme includes three learning objectives relevant to the Stage A written examination. They are 20.1.1, 20.1.2, 20.1.3. Two examples of questions relevant to this theme are:

- E9. The potential for health risks from inhalation of nanofibres will be increased if:
- A. They are soluble in body fluids.
 - B. Their diameter exceeds 1 micrometre.
 - C. Their diameter is less than 0.1 nanometre.
 - D. Their length exceeds what a macrophage can engulf.
 - E. They are volatile.
- E10. Nearly all pathogenic *protozoan* micro-organisms:
- A. Require an insect vector.
 - B. Form spores.
 - C. Cause diseases for which there are no vaccines.
 - D. Cause infections that harm the liver and circulating blood cells.
 - E. Cause zoonotic disease.

Domain 30: Critical appraisal of information

This domain includes ten learning objectives relevant to the Stage A written examination. They are 30.1.1, 30.2.1, 30.2.2, 30.2.3, 30.2.4, 30.3.1, 30.4.1, 30.4.2, 30.5.1, 30.6.1. Two examples of questions relevant to this domain are:

- E11. A prospective study examined the association between two adverse reproductive outcomes – infertility and miscarriage – and at least 50 chemical and radiation exposures to *both* partners i.e. 2 outcomes \times $>$ 50 exposures \times 2 partners. Six hundred couples entered the study. Exposure was recorded simply as exposed/not exposed.

Tests of statistical significance were performed for each outcome and each partner against each of the exposures. Using a level of statistical significance of $p < 0.05$, six disparate chemical exposures (five of them home-related) were found to be associated with adverse reproductive outcomes. The authors concluded that “.....home-based chemical exposure provides a far greater threat to reproduction in our society than occupational exposure”.

The reason chance sampling variability remains a plausible explanation of these findings is that:

- A. A retrospective study design should have been preferred.
- B. There appears to be no account taken of multiple comparisons.
- C. The extent of the exposures were not formally measured.
- D. There was no defined control group.
- E. Miscarriages may not have all been recorded – some seen simply as a ‘late period’.

- E12. For a disease of interest to you, you read that a diagnostic test has the following feature. The proportion of people with the disease that show a positive test result is five times the proportion of people without the disease that show a positive test result. This is describing the test's:
- A. Attributable fraction.
 - B. Positive likelihood ratio.
 - C. Positive predictive value.
 - D. Sensitivity.
 - E. Specificity.

Sub-domain 61: Communication

This sub-domain includes seven learning objectives relevant to the Stage A written examination. They are 61.1.2, 61.2.1, 61.3.1, 61.3.2, 61.3.3, 61.4.1, 61.4.2. An example of a question relevant to this sub-domain is:

- E13. Doctors often rely on printed patient information material to augment verbal instructions or explanations during the consultation. Which one of the following aspects of literacy is the most crucial in relation to patient education capacity when a patient receives printed material?
- A. Reading ability.
 - B. Writing ability.
 - C. Spelling ability.
 - D. Reading comprehension.
 - E. Ability to read out loud.

Sub-domain 62: Quality and safety

This sub-domain includes eight learning objectives relevant to the Stage A written examination. They are 62.1.1, 62.2.1, 62.2.2, 62.2.3, 62.3.1, 62.3.2, 62.3.3, 62.3.4. An example of a question relevant to this sub-domain is:

- E14. At the beginning of your morning shift in the Emergency Department you are asked by one of the nurses to 'tidy up' some paperwork left over from the night before. A patient who has now been discharged after treatment for a fractured radius was given pethidine, a narcotic analgesic that is strictly regulated by law. The nurse tells you that the night resident doctor 'forgot' to write it up because it was a very busy night and he had been distracted by a cardiac arrest and then a motor vehicle accident. The nurse insists that it was given and is pressuring you to countersign the drug register and retrospectively complete the patient's treatment chart. Which one of the following is the most appropriate response to this request?
- A. Ring up the night resident.
 - B. Contact your Medical Defence Association.
 - C. Refer the matter to the senior Emergency Department clinician.
 - D. Sign for the medication and complete the treatment chart.
 - E. Ring up the patient.

Sub-domain 63: Teaching and learning

This sub-domain includes one learning objective, 63.1.1, that is relevant to the Stage A written examination. An example of a question relevant to this sub-domain is:

- E15. The prime purpose of a trainee's performing a mini clinical evaluation exercise (miniCEX) is to offer:
- A. A formal way to learn clinical skills.
 - B. A guide to one's likely performance in a clinical examination.
 - C. A test of clinical knowledge.
 - D. Opportunity for observation and feedback by one more experienced.
 - E. Assurance of one's ability if it is done correctly.

Sub-domain 64: Cultural competency

This sub-domain includes three learning objectives relevant to the Stage A written examination. They are 64.1.2, 64.1.3, 64.1.6. An example of a question relevant to this sub-domain is:

- E16. Cross-cultural communication is likely to be impaired by:
- A. Discussion with a patient who in his or her family should be involved in decisions about care.
 - B. Providing verbal and written information in the patient's preferred language.
 - C. Minimising discussion of any difference in expectations so as to bring an alignment of views.
 - D. Seeking to understand the relevance of values and beliefs and in order to help build a relationship.
 - E. Clarifying final decisions and the expectations of follow-up.

Sub-domain 65: Ethics

This sub-domain includes three learning objectives relevant to the Stage A written examination. They are 65.1.1, 65.3.1, 65.3.2. An example of a question relevant to this sub-domain is:

- E17. A junior medical colleague has been attending a course on medical ethics and seeks your understanding of a term used on the course. He presented the following case and was asked to describe the term 'conspiracy of silence'.

A 78 year old woman has been diagnosed with small cell carcinoma of the left lung with probable liver and bone metastases. Prior to undergoing the diagnostic tests, the patient stated that she did not wish to be told of any serious diagnosis and she also stated that her family were not to be told of her condition. She wants to return home to the care of her trusted general practitioner.

Which one of the following best describes the 'conspiracy of silence' in the case presented?

- A. The doctor agrees to give false information to the relatives about the diagnosis.
- B. The doctor provides the patient with an over-optimistic prognosis for her condition.
- C. The doctor does not provide sufficient detail to her general practitioner to continue her care.
- D. The doctor agrees not to tell the patient her diagnosis.
- E. The doctor agrees not to tell the family of her prognosis.

Sub-domain 67: Leadership and management

This sub-domain has one learning objective, 67.1.2, that is relevant to the Stage A written examination. An example of a question relevant to this sub-domain is:

- E18. At a recent performance review, your supervisor commented that you need to be more assertive. You consider modes of behaviour that you would like to work on. Which of the following item is the best means of being assertive:
- A. Firmly justify and explain any decision to say “No”.
 - B. Try hard to avoid making mistakes.
 - C. Avoid answering a “Yes” that you’ll regret; instead pause and say “Let me think about that”.
 - D. Avoid changing your mind; it makes you look weak or indecisive.
 - E. At the start of an interaction, employ silence to cause the other person to guess what you want.

Sub-domain 68: Health advocacy

This sub-domain includes three learning objectives relevant to the Stage A written examination. They are 68.1.1, 68.2.1, 68.3.1. An example of a question relevant to this sub-domain is:

- E19. The most important way for a doctor to demonstrate an intent to be an advocate for his or her patient is to:
- A. Work to discover ways that the health system has not optimised the patient's care.
 - B. Build the patient's awareness of his or her rights.
 - C. Support the patient in finding resolutions to issues that concern him or her.
 - D. Solve problems about an error in care 'in-house' before legal remedies are applied.
 - E. Take action to redress the inequalities in the health system.

Sub-domain 69: The broader context of health

This sub-domain includes five learning objectives relevant to the Stage A written examination. They are 69.1.1, 69.2.1, 69.3.1, 69.4.1, 69.5.1. An example of a question relevant to this sub-domain is:

- E20. A local community group asks you to give a brief presentation to its members on weight loss and obesity issues, and discuss the meaning of *body mass index* (BMI). Which one of the following concepts about BMI would be the most appropriate to include?
- A. Combined with waist circumference, BMI is the most useful indicator of health risk.
 - B. Weight/standard weight ratio is less reliable than BMI when assessing obesity in children
 - C. Adjust upper limit of normal for BMI upwards for people from South-East Asia.
 - D. Bioimpedance analysis is a more useful measure of obesity than BMI in body builders.
 - E. BMI can overestimate body fat in the elderly.

Answers to example questions:

E1 B

E2 C

E3 E

E4 B

E5 C

E6 B

E7 A

E8 D

E9 D

E10 C

E11 B

E12 B

E13 D

E14 A

E15 D

E16 C

E17 A

E18 C

E19 C

E20 A