ROYAL COLLEGE
OF PHYSICIANS AND SURGEONS OF CANADA
COLLÈGE ROYAL
DES MÉDECINS ET CHIRURGIENS DU CANADA

SPECIFIC INFORMATION REGARDING THE ROYAL COLLEGE ANESTHESIOLOGY EXAMINATION

WRITTEN COMPONENT

The written component consists of two three-hour papers:

Paper I - Multiple Choice Questions (MCQs): approximately 150 questions
Paper II - Short Answer Questions (SAQs): 20 to 30 questions

Both papers assess knowledge in the areas which are considered necessary for the practice of anesthesiology – clinical anesthesiology, internal medicine, and basic sciences. The questions are based on the knowledge necessary for the practicing anesthesiologist and not esoteric material. They are largely derived from standard textbooks (most recent editions published before June 30th, 2015), syllabi from courses *(ACLS, ATLS, NRP, PALS),* national/international guidelines, including, but not limited to, *CAS (Canadian Anesthesiologists' Society), ASRA (American Society of Regional Anesthesia), CBS (Canadian Blood Services), and CMPA (Canadian Medical Protective Association),* and review articles in journals.

Standard Textbooks

Barash, Clinical Anesthesia
Chestnut, Obstetrical Anesthesia: Principles & Practice
Cote, Lerman, and Todres, A Practice of Anesthesia for Infants and Children
Cousins & Bridenbaugh, Neural Blockade
Fleisher, Anesthesia and Uncommon Diseases
Kaplan, Cardiac Anesthesia
Miller, Anesthesia
Stoelting, Pharmacology & Physiology in Anesthetic Practice
Stoelting, Anesthesia & Coexisting Disease

Journals

Anaesthesia
Anaesthesia and Intensive Care
Anesthesia and Analgesia
Anesthesiology
British Journal of Anaesthesia
Canadian Journal of Anesthesia
New England Journal of Medicine
Regional Anesthesia and Pain Medicine

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Paper I - Multiple Choice Questions

Every question has a stem, followed by four options, one of which must be chosen as the best answer. Note that marks are only given for correct answers; no marks are deducted for incorrect responses. Pencils and answer sheets will be provided to you.

Examples of MCQs:

Question 1
All of the following are absolute indications for lung separation EXCEPT ONE. Indicate the exception.
1. Bronchopleural fistula
2. Bronchoaveolar lavage
3. Thoracoscopy **
4. Massive pulmonary hemorrhage

Question 2
Which ONE of the following is metabolized by plasma cholinesterase?
1. Bupivacaine
2. Lidocaine
3. Ropivacaine
4. Tetracaine **

Paper II - Short Answer Questions

Marks are only given for correct answers; no marks are deducted for incorrect responses. If a specific number of answers is requested (e.g. list FOUR), do not list more than requested since they will not be marked (e.g. if four are requested, only the first four will be marked). Please write or print as legibly as possible. Be as brief and as direct as possible, making use of the space provided after each question.

Examples of SAQs:
1. A 53-year-old man with an open forefoot fracture presents for open reduction and internal fixation. He has been difficult to intubate in the past. His past medical history is significant for insertion of a coronary artery stent for stable angina one month ago. He is asymptomatic from a cardiac standpoint. His only medication is Plavix, which he took this morning. He absolutely refuses an awake intubation.

   a) List all FIVE target nerves for an ankle block. (5 marks)
   - *Saphenous, sural, superficial and deep peroneal, posterior tibial nerve*

   b) Name THREE anatomic (non-sonographic) landmarks for a posterior popliteal nerve block. (3 marks)
   - *Popliteal fossa crease, tendon of biceps femoris, tendon of semitendinosus muscle*

2. According to Canadian Anesthesiologists' Society (CAS) guidelines, which FOUR monitors must be exclusively available for each patient, but are **NOT** required to be in continuous use during an anesthetic? **(4 marks)**
   apparatus to measure temperature
   peripheral nerve stimulator
   stethoscope
   appropriate lighting

ORAL COMPONENT

The oral component consists of one session either in the morning or the afternoon. The session lasts approximately 2 hours and consists of four stations (approximately 25 minutes each). After registration, an official invigilator will direct the candidates to the appropriate waiting area before the examination. You may not take any electronic devices, for example, PDA, cell phone, Blackberry, into the examination with you.

Two examiners (and occasionally an observer) are present in every station and each examiner will present a scenario. The examiners may interrupt during the scenario to seek information or to move the scenario forward. Some scenarios focus on assessment, others on management, and all scenarios cover domains related to the practice of anesthesia. No examination of a patient is required.

There will be indication instructing when the station is over, as well as when candidates should exit the room, move to the next station or enter the next room. There will be time allocation between stations to allow examiners to complete their marking and candidates to move to the next station.

You may encounter other candidates in the corridor between room changes or in the waiting room area. It is imperative that you do **NOT** communicate with each other during the oral examination process. Communication between candidates, in the corridor, or in the waiting room area may be construed as irregular behavior and may result in an invalid examination for the candidate, as well as potential denial of entry to future examinations.

Please note that some candidate groups will be sequestered (held in a waiting area) after their examinations. No electronic devices are allowed during sequestration.

Note that no feedback will be given by the examiners and your results will only be available via the Royal College website.

A Royal College Anesthesiology oral scenario is written and reviewed by the examiners. It is designed so that specified objectives can be assessed. It consists of two or three parts where the examiner gives information to the candidate, then asks a question. The answers expected are identified when the scenario was written and certain items are identified as critical features, which the candidate must discuss. Not every feature of a case may be identified as a critical feature of the scenario. The examiner may interrupt the candidate both to probe for critical features not yet offered by the candidate and to advance in the scenario. Below is an example of a Royal College Anesthesiology oral scenario. The text in *italic font* is the information that the examiner would read to the candidate.

Scenario:
You are asked to provide anesthetic care to a five-year-old boy with Down syndrome for magnetic resonance imaging (MRI).

What are your considerations?

Here the examiner is expecting to hear the considerations for anesthesia in this case e.g. The consideration for Down syndrome (to include but not limited to airway features such as large tongue, small high larynx, cervical spine instability; Cardiac anomalies, Developmental delay and cooperation, Thyroid insufficiency), the considerations of anesthesia in a child, the considerations for anesthesia outside the operating room and the considerations for anesthesia in a hostile environment - Magnetic Resonance Imaging (MRI) (e.g. risks to patient, risk to anesthetic equipment, risk to MR machine and images, risks to personnel). Also the candidate should inquire concerning the indication for the MRI.

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The child is a relatively healthy Down syndrome boy. He had an ASD repaired in infancy and the cardiologists are happy with his status. He has had a recent X-ray of his c-spine reported as normal. He has a history of recurrent upper respiratory tract infections (URTIs), but is clear at this time.

He requires the MRI because of two recent seizures associated with pyrexia of 40^{o}C during an URTI.

On examination he has the typical Down face with a large protruding tongue. He is very active and fighting being held. He thrashes out when you attempt examination and is difficult to hold still. He weighs 25kg.

How do you plan to proceed with this child?

Here the candidate is expected to provide a plan for managing this patient for MRI. This would include (but not be limited to) a plan for induction to minimise upset, a plan for anaesthesia in an MRI unit including a plan for monitoring and for recovery. This plan should identify appropriate drugs with route of administration and dosages, appropriate techniques and equipment as well as personnel. The candidate needs to state his/her chosen plan. Alternatives should also be offered with reasons why the chosen technique is preferred.

At the end of the procedure you remove any airway device placed. You notice the oxygen saturation falling and cannot feel or hear any respiration.

What is your differential diagnosis?

Here a prioritized differential diagnosis is required. It should include upper airway obstruction, laryngospasm, drug overdosage.