Report on the Short Answer Question Paper – March 2019

This report has been compiled by the Chairs of the Short Answer Question (SAQ) group to provide information for candidates and trainers about how SAQs are written, how the paper is put together, how pass marks are set and how marking is standardised. It is partly generic and partly specific to the March 2019 paper. There is a section at the end with comments about the individual questions which we hope you will find useful.

The SAQ paper examines a candidate's knowledge of the basic and intermediate sections of the training curriculum as specified by the Royal College of Anaesthetists. Because the time available to answer each question is limited, it also tests judgment, and the ability to prioritise information within the answer rather than just factual recall.

The questions for each SAQ paper reflect the breadth of knowledge required for intermediate training and are generally a mix of new and revised questions. Questions currently in the database are updated or modified in light of new knowledge, current national practice or recommendations from relevant governing authorities before inclusion in an SAQ paper.

Structure of the SAQ paper

The SAQ paper consists of 12 questions to be answered in 3 hours, 6 based on topics from each of the 6 mandatory units of training and six from the general duties, optional and advanced science modules. A maximum of one question is based on the optional modules.

- Mandatory units: anaesthetic practice relevant to neurosurgery, neuroradiology and neurocritical care, cardiothoracic surgery, intensive care medicine, obstetrics, paediatrics and pain medicine.

- General duties: airway management, day surgery, critical incidents, general/urology/gynaecology surgery, ENT/maxillofacial/dental surgery, management of respiratory and cardiac arrest, non-theatre duties, orthopaedic surgery, regional anesthesia, sedation practice, transfer medicine, trauma and stabilization practice.

- Optional modules: anaesthetic practice relevant to ophthalmic surgery, plastics & burns surgery, vascular surgery

- Advanced sciences: anatomy, applied clinical pharmacology, applied physiology/biochemistry, physics/clinical measurement and statistical basis of clinical trial management.

The SAQ paper is written to contain questions with varying levels of difficulty:
- 2 questions adjudged to be difficult (pass mark 10-11/20)
- 8 questions adjudged to be moderately difficult (pass mark 12-13/20)
- 2 questions adjudged to be easy (pass mark 14/20 or more)
- The level of difficulty and the pass mark are finalised using modified Angoff referencing, which takes place during the Paper Checking and Standard Setting meetings of the Final examiners. Angoff referencing uses the experience of the examiners to set a pass mark for each question. All questions must be attempted but candidates do not have to pass all the questions in order to pass the paper.

All SAQ questions are mapped to a specific section of the basic or intermediate curriculum. To facilitate an objective and reproducible marking process, a model answer template is provided for each question. Key facts in this template are bullet pointed and assigned marks. The number of marks available for each section of the answer is shown in the question. All questions are subjected to an exhaustive editing and peer review process before use in an examination. This is explained below.

Quality Control for the March 2019 SAQ paper

Exam week 3rd -7th December 2018 -Paper Checking Day
For paper checking the Final examiners convened, during exam week, at the College and were divided into six teams of 8-10 people, each chaired by a member of the SAQ group. Each team was given two questions and their associated model answer templates to check for factual accuracy, clarity of language and ease of understanding. They made any necessary amendments and assigned a provisional pass mark. The same team subsequently marked the questions they had checked. This helps to ensure that a consistent standard is maintained throughout the SAQ paper process.

Wednesday 20th March 2019 – Standard Setting Day (SSD)
The examiners again convened in their teams at the College and this time marked 4 anonymized SAQ answer booklets (without candidate or College reference numbers) containing the 2 questions they had looked at on paper checking day. College officials chose the four sets of booklets on the basis of MCQ scores, to represent the spectrum of ability within the candidate cohort. The MCQ results for the anonymous candidates were not given to the examiners. Subsequent discussion within each team ensured that all these scripts were awarded every mark allowed by the answer template, and that each examiner applied a consistent standard across all four candidates. At the end of SSD a finalized, Angoff- referenced pass mark was confirmed for each question.

The candidate answer booklets for each set of two questions were then divided amongst the team and taken away for marking. This process results in each of a candidate's 6 answer booklets (2 questions) being marked by a different examiner. This eliminates any risk of bias that could arise with a single examiner marking all twelve questions. The Examination Department staff scrutinise the submitted marks and clarify any ambiguities within the marked scripts before individual scores are ratified.

Results – Friday 5th April 2019

The overall pass rate for this paper was 74.73%

This compares with recent SAQ papers:

- September 2019   58.4%
- March 2018   72.2%
- September 2017   68.81%
- March 2017   50.68%
- September 2016   70.54%
- March 2016   62.65%

Analysis of Results

The pass rate for this exam was higher than in the previous sitting.

Candidates continue to disadvantage themselves in a number of familiar ways:

- **Failure to answer the question asked**
It is very important, even when pressed for time, to read the question carefully and answer what is asked. For example, question 4, asked for the risks to the foetus during anaesthesia. Candidates focused on the conduct of anaesthesia, ignoring the emphasis on the foetus in the question.

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- **Poor knowledge of clinical sciences**

Candidates should be reminded that clinical science forms an important part of the intermediate syllabus and it is an area of the exam that is often underestimated. As in previous exams, knowledge of clinical sciences applied to anaesthesia was poor when compared to clinical knowledge. For example, in question 11 very few candidates were able to demonstrate knowledge about the effects of an exercise programme on cardiorespiratory physiology.

- **Poor weighting of answers**

Candidates should make sure they note how many marks are allocated to each part of the question. Writing extensively on the low scoring sections of the question, to the detriment of other sections, will reduce your overall score.

- **Illegible handwriting**

Examiners take great care to extract answers from a candidate's script, but only material that can be read will achieve a mark. Candidates are encouraged to set out their answers in a bullet point or table format where possible. This aids both legibility and time management. It is also a good idea to practice writing for 3 hours as part of your exam preparation as this is not something that most people are used to.

Results for Individual Questions

Question 1: End stage renal failure

Pass rate 70.7%

An important topic that was generally well answered. Poorer candidates tended to struggle in parts b and d, and this may be a reflection of a lack of clinical experience.

Answers to part b often lacked structure and could have been improved by adopting a systems based approach in answering the question. In the last section, candidates who scored poorly tended to give generic answers with little explanation of the practical considerations in this group of patients.

Question 2: Strabismus correction as a day case procedure.

Pass rate 51.6%

Knowledge of day case surgery in the paediatric population is an important topic. So it was disappointing that this question was answered so poorly. In part a candidates focused on social issues and did not consider medical, anaesthetic or surgical factors in their criteria for day case surgery. Part d was on the whole well answered but very few candidates could give suitable options for analgesia, failing to mention local anaesthetic techniques.

Question 3: Difficult extubation

Pass rate 64.1%

This was a new question based on the Difficult Airway Society (DAS) guidelines on the management of a difficult extubation. Candidates showed a good knowledge on this aspect of airway management. Candidates dropped marks on the last part of the question, where they answered in very general terms rather than detailing the steps they would take.

Question 4: Pregnant lady with acute appendicitis

Pass rate 32.4%

The pass rate for this question was surprisingly low, since it has been asked recently. This is a common clinical scenario encountered by many trainees, and a topic that they should be expected to know. A number of candidates clearly failed to read the question correctly. They focused on the conduct of anaesthesia and airway management, ignoring the emphasis on the foetus in the question. Some candidates also failed to appreciate that the patient was 22 weeks pregnant (the second trimester of pregnancy) and used up valuable time by discussing anaesthetic agents and teratogenesis which is of much lesser importance than it would be in the first trimester.

Question 5: Refeeding syndrome

Pass rate 37.4%

The pass rate for this question was the second lowest overall. This question was another example of candidates disadvantaging themselves by failing to answer the question asked. Part a clearly asked for proportions of carbohydrate etc., but many candidates gave actual daily values rather than a proportion.

Most marks were lost on the final part of the question. The section on patients at risk of refeeding syndrome was poorly answered with many candidates listing a series of illnesses, rather than showing that they knew the underlying problem. Candidates also needed to be more specific in their answers to management of refeeding syndrome. The examiners were looking for points such as; initial energy provision, timescale and supplementation of vitamins. Many answers were too vague and lacked sufficient detail to gain any marks.

Question 6: Laser surgery
Pass rate 67.0%
Candidates scored well in parts a, b and c of this question. However, it would appear from some answers to part d that many candidates had minimal experience of laryngeal surgery and were unclear as to methods used to ventilate/oxygenate patients during this type of surgery.

Question 7: Effects of cigarette smoking
Pass rate 69.6%
Candidates showed a good understanding of the effects of smoking, its pathophysiology and anaesthetic implications. This question had been used previously so it was satisfying to see that that candidates had learned more about the topic in the interim.

Question 8: Dilated cardiomyopathy
Pass rate 67.6%
Despite a respectable pass rate, many candidates demonstrated a lack of knowledge on this subject. The feeling of the examiners was that the question proved straightforward to those candidates who had rotated through a cardiac module. Many weaker candidates didn't have sufficient knowledge or clinical experience to discuss the practicalities of anaesthetizing patients with dilated cardiomyopathy.

Question 9: Post-amputation pain syndrome (phantom limb pain)
Pass rate 52.7%
Examiners were surprised at the lack of knowledge on this topic particularly as this question had been used recently. The condition is important and frequently seen, so candidates should know it in more detail than was demonstrated here. Poorer candidates were unable to describe the features or management of phantom limb pain.

Question 10: Perioperative anaphylaxis
Pass rate 90.3%
This is an important topic and was well answered. The pass rate was the highest on the paper. It is reassuring that candidates have sound knowledge of the management of anaphylaxis.

Question 11: Prehabilitation
Pass rate 71.4%
Prehabilitation is topical and relevant to clinical practice, covering both perioperative medicine and basic sciences. This was a new question and was anticipated to be difficult for the candidates. Reassuringly this was well answered by the majority of candidates and had a good pass rate. The basic sciences component of the question, part d, along with the benefits of carbohydrate preloading, part e, were both poorly answered.

Question 12: Thrombotic ischaemic stroke
Pass rate 63.4%
This was well answered with candidates exhibiting good knowledge. Poorer candidates tended to discuss general ICU management and failed to consider the specific neuro critical care interventions.

Summary
The pass rate of this SAQ exam was the highest for a number of sittings. We congratulate the successful candidates on the standard and breadth of their knowledge.

Candidates did less well in mandatory units of training and applied clinical science. This is a trend we have previously seen. We would remind candidates that a certain level of clinical experience is

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needed to pass the Final FRCA. We would encourage candidates to gain some clinical exposure to the mandatory units of training in particular before attempting the exam, so as to maximise their chances of passing at the first attempt.

Finally, the conduct of the SAQ paper would be impossible without the hard work of the Final FRCA examiners and of the examinations department staff and we are extremely grateful for their continued and enduring support.

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Chairs, short answer question group
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