

Report on the Short Answer Question Paper

September 2015

This report has been compiled by the Chairs of the Short Answer Question (SAQ) group to provide information about such things such as 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 September 2015 paper. There is a section at the end with comments about the individual questions from that paper that we hope you will find useful.

The SAQ paper examines a candidate's knowledge of the basic and intermediate sections of the training curriculum 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.

The questions chosen to be used in 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 and 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 anaesthesia, sedation practice, transfer medicine, trauma and stabilization practice.
- Optional modules: anaesthetic practice relevant to ophthalmic surgery, plastics & burns surgery, vascular surgery and 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 a process called 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 such that a “typical” trainee, with adequate preparation, knowledge and experience, will perform satisfactorily and achieve a pass for the whole exam.

All SAQ questions are mapped to a specific section of the basic or intermediate syllabus. 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 September 2015 SAQ paper

Thursday 25th June 2015 – Paper Checking Day (PCD)

- For PCD the Final examiners convened at the College and were divided into six teams of 8-10 people, each led 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 16th September 2015 – Standard Setting Day (SSD)

- The examiners again convened in their teams at the College and this time marked 4 anonymised 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 9th October 2015

The overall pass rate for this paper was 49.5%

This compares with recent SAQ papers

- March 2015 45.30%
- September 2014 30.32%

Analysis of Results

The pass rate for this exam was greater than at the last 2 sittings which is very encouraging. However, 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, in question 1 of this exam about CSF, part (d) asked for factors predisposing to the development of a post-dural puncture headache after lumbar puncture. Unfortunately, many candidates talked about the factors that increase the risk of accidental dural puncture and, whilst the information they gave on that topic was correct, it was not what was asked for so they could not be given any marks.

The examiners will often anticipate confusion and will underline parts of the question so as to draw your attention to them. In this paper this was done in parts (b) and (c) of question 3 about severe pre-eclampsia. In part (c) the question was written as follows: *What changes would you make to your usual general anaesthetic technique for a pregnant woman, if this woman needed a general anaesthetic for caesarean section?* The answer that was expected was the changes you would make to your general anaesthetic technique in the presence of severe pre-eclampsia. However, some candidates simply wrote about how to give a general anaesthetic to any pregnant woman so scored very few marks despite having written a great deal.

- *Poor weighting of answers*

Make sure you 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.

Results for Individual Questions

Question 1: CSF Physiology and lumbar puncture

Pass rate 50.9%

This was one of the easy questions in the paper so we would have expected the pass rate to have been a little higher. As mentioned above, some candidates did not answer the question asked in part (d) so lost marks.

Question 2: Dental Sedation

Pass rate 62.1%

This is an important topic and was generally well answered despite some confusion caused by the inclusion of a table that required completion. It had the highest pass rate of all the questions.

Question 3: Pre-eclampsia and severe pre-eclampsia

Pass rate 16.1%

The poor pass rate for this important subject is of concern as pre-eclampsia is a common condition that all candidates should have encountered. Severe pre-eclampsia is an emergency for which the principles of management should be known. Surprisingly few candidates could give an acceptable definition of pre-eclampsia and even fewer knew that control of systolic hypertension is of prime importance in preventing intracerebral bleeding in women with severe pre-eclampsia. Again, as mentioned above, failure to read the question in part (c) meant that some candidates lost marks by not answering what was asked.

Question 4: Chronic opioid use and analgesia conversion

Pass rate 25.0%

It was anticipated that candidates would find this question difficult and this proved to be the case. Some candidates lost marks because they wrote exclusively about the drugs they would use to manage opioid requirements for this patient but did not mention more general measures such as involvement of the pain team. Very few candidates gave any information about management of transdermal pain patches in the peri-operative period. There are differing opinions as to whether patches should be continued, particularly in the case of buprenorphine, but candidates were able to gain marks for either opinion provided they showed that they were aware of the potential problems of altered absorption and partial antagonism.

Question 5: Thyroidectomy

Pass rate 31.9%

The first and last parts of this question on pre-operative tests and postoperative considerations were well answered. The majority of the marks were lost in the middle section on issues to be aware of during anaesthesia for elective thyroidectomy. Many of candidates concentrated on management of thyroid storm or difficult airway, both of which are relatively rare during such surgery. It is likely that some candidates failed to read the question correctly because it was clearly stated that the patient was euthyroid making thyroid storm very unlikely.

Question 6: Spinal injury

Pass rate 49.4%

This question had the highest correlation with overall performance i.e. candidates who did well in this question performed well overall in the SAQ. The examiners commented that part (d) about the advantages of regional anaesthesia for elective lower limb surgery, was not well answered. Candidates tended to give general answers such as “avoids the need for general anaesthesia” or “maintains cardiovascular stability” rather than specific advantages such as “reduces the risk of autonomic dysreflexia” or “avoids postoperative respiratory inadequacy due to general anaesthesia”.

Question 7: Shoulder block

Pass rate 48.3%

This question also correlated well with overall performance. The anatomy was not well known to a lot of the candidates so quite a few marks were lost here. This is a recurring theme in the Final exam - remember that anatomy relevant to clinical practice is likely to be included. Failure to read the question again caused some candidates to lose marks. Part (b) asked specifically for possible neurological complications of an interscalene block and quite a few candidates wrote about non-neurological complications.

Question 8: Smoking and anaesthesia

Pass rate 55.5%

The relevance of this question to everyday practice makes the fact that it was well answered all the more pleasing. Candidates who lost marks generally did so because they did not know the pathophysiological mechanisms involved in the difficulties caused by smoking. Remember that applied physiology is also part of the syllabus.

Question 9: Neurological complications of coronary artery bypass grafting

Pass rate 54.6%

Candidates who did well in this question tended to do well overall. There was quite a spread of scores with some candidates having a very clear idea of the answers and others seemingly not very much idea at all. Whether this reflects the fact that some candidates sitting the exam have no experience of cardiac anaesthesia is not clear. However, as stated in previous reports, candidates who have no exposure to the mandatory units of training should endeavour to spend a few sessions gaining first hand experience prior to sitting the SAQ paper.

Question 10: Paediatric meningitis

Pass rate 56.9%

The pass rate for this question was the second highest in the paper but the examiners still felt that it was not particularly well answered. Many candidates lost marks because they wrote similar answers for parts (b) and (c), despite the fact that in part (c) they were asked to comment on what they would do if the measures used in (b) were not successful in resuscitating the child. Incorrect dosages of drugs, particularly antibiotics were often quoted.

Question 11: Splenectomy in a patient with Hodgkin's lymphoma

Pass rate 38.8%

Many examiners marking this question felt that either the candidates had not read the question as carefully as they should have done, or they lacked knowledge of the implications of Hodgkin's lymphoma and its treatment for anaesthesia. Rather than focusing on specific factors of importance many candidates wrote about general problems when anaesthetising for a splenectomy. This was reflected in the pass rate.

Question 12: Ventilator associated pneumonia (VAP)

Pass rate 44.3%

This is a common condition that candidates should have seen so it was surprising that it was quite poorly answered. Very few candidates were able to give a definition of VAP or to give details of the care bundles used in its prevention and treatment. Merely stating "a care bundle would be used" suggests inadequate depth of knowledge.

Summary

It is encouraging to see that the pass rate for this sitting of the SAQ paper has increased when compared to the last two. Of particular note is the fact that 4 of the questions on mandatory units of training had amongst the highest pass rates. This has not been the case in recent exams and suggests that candidates have taken the advice contained in previous reports to delay sitting the final FRCA exam until they have some clinical experience in these subject areas. However, it is worrying that the obstetric questions continue to be poorly answered particularly as pre-fellowship trainees will often be working with distant supervision when on call for obstetrics.

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.

Dr Fiona Donald & Dr Kevin O'Hare
Chairs, Short Answer Question Group