Report on the Short Answer Question Paper – March 2018

The Chair of the Short Answer Question (SAQ) group, has compiled this report 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 2018 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. Before inclusion in an SAQ paper, questions currently in the database, are updated or modified in light of new knowledge, current national practice or recommendations from relevant governing authorities.

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 2018 SAQ paper

Monday 5th February 2017 – Paper Checking Day (PCD)

For PCD a cohort of the Final examiners convened at the College and were divided into six teams of 2-3 people. 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.

Wednesday 14th March 2018 – Standard Setting Day (SSD)

- The examiners, in teams of 10, convened at the College and each team marked 4 anonymized SAQ answer booklets (without candidate or College reference numbers) containing 2 questions. 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 6 April 2018

The overall pass rate for this paper was 72.29%
This compares with recent SAQ papers:
- September 2017   68.81%
- March 2017   50.68%
- September 2016   70.54%
- March 2016   62.65%
- September 2015   49.50%

Analysis of Results

The pass rate for this exam was higher than in the last sitting, but similar to the two previous sittings. 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, some candidates confused phaeochromocytoma with carcinoid in Q9.

- *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.

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- *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 practise 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: Free flap breast reconstruction.
Pass rate 64.3%
This was a well answered question and candidates gave very comprehensive answers, giving almost too much information in some cases by including very general considerations, rather than simply those specific to free flap surgery. However, the poorer candidates struggled to score marks and this may reflect lack of clinical exposure to such cases.

Question 2: Advanced cancer pain
Pass rate 85.5%
This was a new question and had the best pass rate of the paper. It is encouraging that the candidates knew this topic so well.

Question 3: Cardiac implantable devices
Pass rate 44.6%
Not a well answered question. Section A, in particular, was poorly answered reflecting a lack of basic medical knowledge. The section on management in the perioperative phase was well answered which is reassuring as it is important for patient safety.

Question 4: Delerium
Pass rate 46.5%
This was a new and very topical ITU question. Overall the management of delirium was described well but a lot of answers lacked detail. There was poor knowledge of the definition and features of delirium. This probably reflects the fact that candidates have dealt with many patients with delirium whilst working on ITU, but have not read around the subject.

Question 5: Near drowning
Pass 62.4%
This question had been used before and was thought to be easy. However, the answers to the management section were poor with candidates concentrating solely on intubation and ventilation and demonstrating little knowledge of any other management.

Question 6: Transphenoidal hypophysectomy
Pass rate 48.7%
Again, a previously used question, and as such, disappointingly poorly answered. Candidates did not give enough specific information in the management section, concentrating instead on generic anaesthetic considerations. This probably reflects lack of experience in this area of neurosurgery and lack of appreciation of the challenges of the procedure.

Question 7: Preoxygenation
Pass rate 67.5%
Generally a well answered question. It is good to see that basic physiological knowledge is maintained.

Question 8: Cerebral Palsy
Pass rate 78.8%
The pass rate is encouraging with candidates demonstrating knowledge of the difficulties of dealing with such patients.

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Question 9: Phaeochromocytoma
Pass rate 39.3%
This was a surprisingly poorly answered question, having the lowest pass rate of the exam. Some people did not read the question or, more likely, confused phaechromocytoma with carcinoid syndrome. It was clear to the examiners that most candidates had never seen the condition, but more worryingly would not be able to manage it in an acute situation.

Question 10: Pre-eclampsia
Pass rate 59.8%
A common theme from previous exams is that obstetrics seems to be poorly understood, with candidates demonstrating only superficial knowledge of the common obstetric complications. Some did not appreciate the difference between pre-eclampsia and eclampsia and were weak on definitions. Many candidates will have a great deal of practical knowledge of obstetric anaesthesia from their time on call for delivery suite, but seem to lack theoretical knowledge to back it up.

Question 11: Total intravenous anaesthesia
Pass rate 74.0%
This question had a good pass rate but some candidates gave very brief answers. This may reflect poor time management in questions 11 and 12 because they are at the end of the paper. Handwriting often deteriorates in these questions, possibly for the same reason. A few candidates misread the question and gave answers about the pharmacokinetics rather than the components of a target controlled infusion system.

Question 12: Bimaxillary osteotomy
Pass rate 71.1%

Despite the good pass rate the examiners felt that the candidates had little knowledge of the specifics of anaesthesia for this operation. Marks were scored in the section about the management of throat packs and in description of basic anaesthetic practice but there was a feeling that clinical experience was lacking, with some candidates not understanding the need for nasal intubation nor the reason for the operation.

Summary

The pass rate of this SAQ exam was at the expected level. We congratulate candidates on the standard and breadth of their knowledge.

The pass rate in the questions on general topics was good but was less so in the questions on specialist modules.. We would encourage trainees to visit specialist units for taster sessions if they have not yet finished their specialist modules. The questions on neuroanaesthesia, cardiac anaesthesia and intensive care medicine were particularly poorly answered. Knowledge of obstetrics was surprisingly weak this has been mentioned in several previous reports.

Evidence of poor time management was seen in questions 11 and 12, this is an area that candidates should work on.

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. I am extremely grateful for their continued and enduring support.

Dr Gary Lear,
Chair, Short Answer Question Group
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