

## **Report on the Short Answer Question Paper**

**September 2016**

This report has been compiled by the Chairs of the Short Answer Question (SAQ) group to explain to candidates, trainers and our regulators, the processes of writing SAQs, constructing the exam paper, setting the pass marks and standardising the marking. It is in part generic, and in part specific to the September 2016 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 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, not 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. Questions may also contain elements of professionalism as outlined in the curriculum

- 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
- 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 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 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 September 2016 SAQ paper**

#### ***Friday 24<sup>th</sup> June 2016 – 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 21<sup>st</sup> September 2016 – 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 14th October 2016**

The overall pass rate for this paper was 75.25%

This compares with recent SAQ papers

- March 2016 62.65%
- September 2015 49.50%
- March 2015 45.30%

### **Analysis of Results**

The increase in the pass rate is excellent news and candidates are to be congratulated. It would appear that previous examination reports have been read and acted upon as there were fewer instances of the usual common errors such as failure to answer the question asked, poor weighting of answers and illegible handwriting.

### **Results for Individual Questions**

**Question 1:** General - Management of aspiration of gastric contents and NAP 4

*Pass rate 77.5%*

This was adjudged to be an easy question and most candidates answered it well demonstrating good knowledge of how to manage such an emergency and of the recommendations of NAP 4. The few candidates who did less well wasted time describing general intraoperative safety measures that were not relevant to the scenario outlined.

**Question 2:** General & pharmacology - Complications of diabetes and oral hypoglycaemic drugs

*Pass rate 38.4%*

Knowledge of the complications of diabetes was comprehensive and probably reflects the fact that we all see a great many diabetic patients in our everyday practice. Marks were lost in section (c) as very few candidates knew about any oral hypoglycaemic drugs other than sulphonylureas and biguanides. The other classes of drugs are now quite frequently used and should therefore be known about, particularly given the aforementioned increasing prevalence of type 2 diabetes in our surgical and intensive care populations. It is important to remember that applied basic sciences such as pharmacology form part of the syllabus for this exam.

**Question 3:** Intensive care - physiology of brainstem death

*Pass rate 68.8%*

Examiners anticipated that candidates would find this question difficult but gratifyingly most achieved enough marks to pass and demonstrated good knowledge of this important topic.

**Question 4:** Obstetrics - spinal anaesthesia for Caesarean section

*Pass rate 77.5%*

This was reassuringly well answered. Pain during Caesarean section is an important topic as it is extremely unpleasant for patients and is one of the leading causes of litigation against anaesthetists. Most candidates knew the steps to take both when dealing with a poor spinal block identified before the start of surgery, and when managing pain occurring during the procedure.

**Question 5:** Vascular - endovascular aneurysm and acute kidney injury

*Pass rate 57.2%*

There were no major themes that emerged in the answers to this question. It was presumably easier to answer for those who had had the chance to see the procedure during their training.

**Question 6:** Neuro critical care and anaesthesia - Guillain Barré syndrome

*Pass rate 53.3%*

This was surprisingly poorly answered with some candidates becoming confused between Guillain Barré syndrome and Myaesthesia Gravis. In section (c) some candidates lost marks by not mentioning the findings of investigations. Part (d) was answered with regard to general principles of intraoperative management of a critically ill patient, rather than the measures specific to a patient recovering from GB.

**Question 7:** Paediatrics – anaesthetic implications of Down's syndrome

*Pass rate 62.1%*

Knowledge of this subject appeared to be good and the question was generally well answered. However, some candidates lost marks because they did not go into enough detail regarding airway difficulties. Simply stating "difficult airway" was not sufficient as this does not describe the specific difficulties in this case. These could be divided into those related to the presence of enlarged adenoids and tonsils and those related to a child with Down's syndrome. Candidates who scored well mentioned the possibility of airway obstruction after induction of anaesthesia, the need for airway adjuncts, possible subglottic stenosis and/or atlanto-axial instability, amongst other things.

**Question 8:** Cardiothoracic - cardiac tamponade

*Pass rate 81.4%*

This question had the highest pass rate in the paper. It is an important topic and it is good to see that candidates are aware of the signs and symptoms and treatment options for this emergency.

**Question 9:** Orthopaedics - enhanced recovery in orthopaedic surgery

*Pass rate 59.4%*

This was predicted to be an easy question and whilst most candidates answered it well, some did not appear to know the reasons for having an enhanced recovery program nor what the elements of it would be. This is surprising given that most hospitals now run such programs for their patients in various surgical areas.

**Question 10:** Gynaecology - anaesthesia for gynae-oncology surgery

*Pass rate 39.1%issues*

This question was not well answered. Candidates tended to talk about general principles of perioperative management rather than those issues that are specific to a patient having surgery as part of treatment for cancer such as possible bone marrow suppression or other organ damage due to chemo or radiotherapy, cachexia, pleural or abdominal effusions and difficult venous access, to name but a few.

**Question 11:** Pain - complex regional pain syndrome

*Pass rate 75.2%*

This question had the greatest predictive value of the 12, which means that candidates who scored highly in this question tended to do well overall. Most marks were gained in part (c) which dealt with treatment options for complex regional pain syndrome. The signs and symptoms of the syndrome are based on the Budapest criteria and knowledge of these appeared to be patchy.

**Question 12:** Non-theatre - MRI

*Pass rate 45.8%*

Despite the fact that many candidates will have accompanied patients to the MRI scanner, knowledge of the specific precautions needed to prevent harm during such a procedure was poor. Points were lost by concentrating on the difficulties of anaesthesia in a remote location which, whilst important, were not what was asked for.

**Summary**

Candidates, trainers and examiners will be pleased and encouraged to see that the pass rate of the SAQ paper has increased again. All but one of the questions on the mandatory units of training were well answered and had amongst the highest pass rates in the paper. As mentioned above, candidates seem to have heeded the advice to read the questions carefully and to note the distribution of marks when constructing their answers.

Finally, it would be impossible to run the SAQ exam without the hard work of the Examinations Department staff and of the Final FRCA examiners and we are extremely grateful for their continued and enduring support.

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**Chairs, Short Answer Question Group**  
**October 2016**