Introduction

'Know your enemy,
know yourself,
and your victory will not be threatened.
Know the weather,
know the terrain,
and your victory will be complete.'

Sun Tzu's Art of War, 496 BC

So, if you are reading this we guess the exam is on the horizon and you are looking for some help with the dreaded Final FRCA Short Answer Question (SAQ) paper. Well fear not, as with a little preparation and the right level of knowledge, the SAQ paper is in many ways the easiest part of the Final Examination to pass. 'They would say that' you may say to yourself but it is true. The SAQ paper rarely throws up any true 'curve balls' as, when setting the paper, the examiners have to identify topics that are important, evidence-based and represent widespread contemporary practice. This means that you are unlikely to have to deal with a historical subject such as althesin, a controversial subject such as steroids in sepsis or a subject that is not in widespread practice such as xenon (this may be fair game in the MCQ). You can even fail a substantial number of questions and still achieve a pass. As Sun Tzu said above, for your victory not to be threatened you must first know your enemy. To let you truly understand your enemy, we would like to deal with some frequently asked questions about the SAQ paper.

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SAQ FAQs

The Final FRCA: what is the point?

The Royal College of Anaesthetists (the College) has a number of duties when it is examining anaesthetists for Final FRCA. It has to

– assess whether you will have enough knowledge to handle life as a consultant. In education-speak, this means that the exam is criterion-referenced. It is designed to assess what you can do rather than where you sit within the exam-sitting cohort. This should mean that in theory, everyone could pass any given sitting of the Final FRCA. Now there's a happy thought (although equally, everyone could fail!).

– assess whether you can appreciate both sides of an argument. The College likes candidates, by the time they sit the Final FRCA, to be able to grasp concepts and principles about anaesthesia. In addition to the knowledge base you amassed for the Primary Examination, you should have a good grasp of the current literature and an opinion on areas of controversy.

– show that the College is doing the right thing. Hence the focus on safety, and up-to-date, topical, scientific, widely accepted subjects.

What does the SAQ paper consist of?

You have to write 12 questions in 3 hours. That is 15 minutes per question, maximum. You currently have six booklets (Blue, Pink, Green, and Yellow, Orange and White).

The questions are printed in the booklets with one at the front and one halfway through.

When is the paper set?

Preliminary work will have been under way since the previous written paper. The paper is finalised about 6 weeks before the written exam.

Should I answer the questions in order?

We would recommend that you do answer the questions in order. Some people like to answer questions they find easy first of all in the hope that inspiration will have struck when the difficult questions are tackled. This means that not only do they make life difficult for themselves fumbling between all the different coloured booklets, but that they are also going to end up tackling the most difficult questions when they are most tired and time pressure is at its worst.

How is my mark calculated?

In the exam, questions are marked out of 20. Of those, 2 marks are given for clarity, judgement and the ability to prioritise. In a recent personal communication with an examiner, we were told

> We are looking for safe, sensible, answers that avoid a 'scatter gun' approach that includes anything that may (or may not) be distantly relevant. Such an answer will not gain the marks for judgement and the ability to prioritise. …If a candidate makes a serious or dangerous error … more than 2 marks may be withheld. A clear reason must be recorded for this.

The remaining 18 marks are scored comparing inclusions in your answer with points on a model answer plan. He went on to say

> The Examiners at Paper Setting Day and Standard Setting Day agree what marks can be given for each section and have in their marking proforma aspects of the answer which can be considered 'Essential', 'Desirable' and 'Supplementary' although it is NOT a tick-box scheme.
>
> The scores for each of the 12 questions are added and compared to the total pass mark set by the Examiners. However, the actual pass mark is moved downwards statistically because we know the SAQ currently has a reliability of 73% (*reliability means the ability of an exam to yield similar evaluations of a candidate's ability over repeated administrations with some degree of statistical certainty*). The 2+ marks are derived statistically.

The exact number passing is unpredictable for any given paper as the pass mark is shifted to represent the quality of that exam's cohort. You may fail the majority of the

Table 1. *Distribution of question by sub-specialty*

	Total number of questions in 10 papers	% per paper	Average per paper
General anaesthesia	41	34.2	4.1
Intensive care	24	20	2.4
Paediatrics	13	10.8	1.3
Physiology, physics and equipment	10	8.3	1.0
Pharmacology	9	7.5	0.9
Anatomy	8	6.7	0.8
Obstetrics	8	6.7	0.8
Acute and chronic pain	7	5.8	0.7

questions and still proceed to the oral exam stage, provided you pass the MCQ paper. Prior to 2007 the approximate standard to achieve an overall '2' on the SAQ paper was usually to score a minimum of around six '1+' and six '2'. It is thought that the modern scheme would be likely to equate to a similar standard.

You must answer all the questions. Any question that appears unattempted will score 0 and will lead to a 1 for the paper and automatic removal from the exam. Leaving a question unanswered is as good as not bothering to turn up on the day. Answer all the questions.

The College has stated that from September 2009 the MCQ and Short Answer Questions (SAQ) examination marks will be added together to give a single result. Both papers will carry equal weight. The pass marks for each part of the examination will be calculated in the current way. The pass mark for the combined examination will be the sum of the pass marks of the two papers. The written examination will stand apart from the viva examination, it will be pass/fail and must be passed before applying to sit the vivas. A pass in the written examination will be valid for two years.

How are the sub-specialties represented in the paper?

In the previous 10 papers we found the distribution shown in Table 1. This pattern has not changed much since the first paper in 1996.You will have to face about four general anaesthesia questions, two intensive care questions and about one each of the other disciplines. If, for example, you find anatomy really difficult and decided to leave it out of your revision plan, you would have to sit three papers to hit one that had no anatomy question. The advice for revision is therefore that you do have to spread your revision time across all the subject areas.

Are questions repeated?

When the SAQ paper was originally developed in 1996, there was a habit of regularly repeating questions from previous exams. This stopped after a few years but has started to re-occur. In the April 2008 paper, two of the 12 questions were repeated from a recent paper. The perceived view is that the College may repeat questions which were thought to be strong, but were answered poorly. This raises the question 'Is it worthwhile going through past papers?' Regardless of whether the College is repeating SAQs, we would maintain that it is definitely worth going through the past SAQs and at least formulating answer plans and checking that your knowledge covers the questions. This returns to the idea that the questions are relevant, contemporary and testing widespread, non-controversial, evidence-based topic areas. In total they cover a

substantial part of the Final FRCA syllabus and knowledge gained may help with the SAQ and will certainly help with the MCQ.

How should I prepare?

We talk later in this section under 'How should I use this book' about some aspects of preparation such as choosing the right pen. Other simple tactics may also prevent you self-destructing. Do whatever you can beforehand to minimise your stress on the day. Pack your bag the night before and go to bed early. Try to avoid an unreliable 3-hour train journey on the morning of the exam. If possible, stay overnight as close to the exam room as possible (within reason – no camping on the steps). Get a good breakfast and something to drink. If like most anaesthetists you have a coffee habit, get some on board. A caffeine slump 2 hours in will not help you. Having to leave the SAQ paper for an urgent bathroom visit is a recipe for disaster. This will take at least 10 minutes, which will seriously disrupt your timing. Deal with this before you walk into the exam room. Depending on your position on the healthy scale, nicotine patches or dried fruit may help you get through the morning. One is taken orally and the other transdermally. Don't get them the wrong way round.

What is the best answer plan tactic?

There are a number of answer plan tactics that different people swear by.

Some people are able to sit down and write for 15 minutes in an ordered way without an answer plan. In general this is difficult to do without missing or underrepresenting some area of the question. You also do not allow yourself any time to order your thoughts. If you can write essays purely using an answer plan held in your brain without losing content, then this is the most time-efficient tactic. Most mere mortals will not be able to use this tactic effectively. Some sort of written answer plan will therefore be required.

Substantial, structured answer plans are at the other end of the spectrum and are to be discouraged. They will use up too much of your precious 15 minutes per question that should be used for writing down content.

Some course organisers for The Final SAQ paper advocate spending the first hour writing all 12 of your answer plans before writing any of your essays. The theory is that this will allow your subconscious to work on all the questions and pull out all deeply held knowledge. I am unaware of this tactic having been shown to be more effective and it would seem to us to be counterintuitive, as a significant amount of time would be lost writing answer plans that should be used for writing content down on the page.

Other people like to jot down 10 or so words and phrases at the top of their answer to remind themselves of a structure or of areas that they are concerned they may miss out. This does work for some people.

We recommend a slightly different tactic that seems to be effective for most people. This is a rolling plan that develops into your final answer. For example in the question 'Describe the drugs used in the management of pre-eclampsia', the different drugs or drug groups would initially be written in the booklet with half a side gap between each one. Once you are happy you have remembered most of the major drugs, you then go back and pad out each section with good content. Remember to leave more space for the main areas of the answer. It is best to leave too big a gap rather than too small. An answer with gaps between paragraphs looks acceptable, whereas a cramped up answer with arrows re-directing the reader to addendum sections looks poor. Learn how much you write for a full 15-minute essay and how much for each 10% of that time. This will also allow you to keep to time. The unique value of this tactic is that everything you put down in your answer plan gets incorporated into your final answer.

The most important factor with an answer plan tactic is that you have decided on one prior to the exam, tried it out on a number of occasions and found it to work well for you.

How should I start an answer?

When starting an answer, it is an excellent idea to start with what we call 'The phrase that pays'. This is a succinct sentence that immediately demonstrates to the examiner that you know what you are talking about. (This is also a handy habit to get into for the vivas.) The phrase that pays will need to be crafted for each individual question. It may just be a perfect definition, or a description of a classification system. It may be the initial set-up for performing a block. Whatever form it takes for any given question, it will immediately comfort the examiner that you are knowledgeable and well organised.

What do the stems mean?

The stem of the question is the initial section and indicates to the candidate the style and depth in which the examiners wish the question to be answered. Some of the stems are self-evident, such as 'List…' or 'Draw…'. Some are slightly more subtle in their meaning. In 1996 the essay part of the Final FRCA was reduced from five out of seven 30-minute essays to twelve 15-minute compulsory SAQs. The new paper saw the paper's stems rapidly change. Gone were the 'Compare and contrast, Criticise, Evaluate, Interpret, Justify, Relate, Review' and 'Trace'. In came 'List, What is.., Define, Discuss, How can…, What do you understand by the term…, Classify…'. As the exam has evolved, with more multi-part questions, emphatic stems that require discrete answers have become widespread. The College still requires some evidence that the candidate can assimilate information and process principles and concepts. The examiners do therefore also use some descriptive stems. These usually call for a more succinct paragraph than the descriptive stems of the old exam, and include 'Write brief notes on…, Outline…, Summarise…, Describe…, Explain…, Discuss…'.

'Write a guideline…' has come up in the past (April 2002), but is a rare beastie. It has probably proven to be unpopular as we are all aware that it takes committees many months to agree on even simple guidelines. Using a box diagram may be a way to tackle such a question. If you do need to draw a flow or box diagram, write all the text you are planning in first before drawing the boundaries around all the boxes and connecting the arrows

'Draw…' tends to polarise the candidates for the exam into two distinct groups. The first see this as an absolute breeze and the opportunity for easy marks. The second group feels their hearts sink and regress back to performing badly at GCSE Art. This is not a drawing competition but draw does mean draw. When revising learn how to draw simple reproducible line diagrams. There are a number of tips that help most people improve their performance on a 'draw' question.

Make sure your drawing has a title. This may get you a point on its own.
If you are asked to draw the anatomical relations to a specific structure, such as median nerve at the wrist in cross section, draw that object in first, then the anatomical relations and finally put the skin boundary in. Do not start by drawing the oval skin boundary in first and then trying to cram all the anatomy within that boundary.
If you are asked to draw an anatomical space (e.g. femoral triangle), it is usually best to start with a large drawing of the boundaries. Be guided by the question.
Draw BIG. Use the whole page.
Neatly label everything.
Do not be limited to nerves, arteries and veins. There may well be some marks available for labelling 'loose connective tissue' or 'lymph nodes'.

Use the time available. Drawing questions are often particularly poorly timed by candidates, who either take a few seconds and move on, missing lots of easy extra marks, or draw something beautiful but overly time-consuming.

'Write a letter to a GP…' has come up before but is also pretty rare. For this answer, notes won't do. The letter does not, however, need to be elaborate and could be as simple as:

'Dear Sir/Madam,
Thank you for asking me to review this gentleman with a strong family history of malignant hyperpyrexia. Advice regarding future anaesthetics would include….'

You will need to write in sentences and finish it off in a formal fashion. You should not sign or write your name.

What about keywords?

When initially reading a question it is often easy to identify keywords that allow you to determine what the examiner is trying to ask and focus in on the precise nature of the question. This will unlock the main points of the question and stop you missing the point. For example in the question:

'You are asked to see a 2-year-old boy in the Emergency Department who has stridor and a barking cough. He is febrile and is sitting upright with suprasternal and subcostal recessions. What is stridor and what does it indicate? List the possible causes of stridor in a child of this age, indicating which is the most likely in this case. Outline your initial management of this child in the Emergency Department. *Oct 2007*'. Underlining the keywords would give:

'You are asked to see a 2-year-old boy in the Emergency Department who has stridor and a barking cough. He is febrile and is sitting upright with suprasternal and subcostal recessions. What is stridor and what does it indicate? List the possible causes of stridor in a child of this age, indicating which is the most likely in this case. Outline your initial management of this child in the Emergency Department.' By highlighting keywords, when attempting the last part of the question you would focus your answer only on initial management, only on a child with this clinical picture and only in the Emergency Department. This may stop you wasting valuable time discussing irrelevant aspects of management.

How should I strike a balance between detailed and comprehensive answers?

Usually the key is the stem of the question. Consider the following four variations on a question about factors that reduce MAC:

List the factors that reduce MAC
Discuss factors that reduce MAC.
State three factors that may reduce MAC and outline why
What is the single most important factor that may reduce MAC? Why?

If you were to list all the physiological, pathological and pharmacological factors that reduce MAC, you would have a very long list. Equally, a detailed description of age and MAC would also easily fill a 15-minute essay. In the questions here, the earlier ones call for a broad comprehensive list and the latter questions are asking for more detail on individual factors on the list

How do I avoid missing detail?

Detail in a question is often the subtle stuff that lifts your answer from being a fail to a pass or a pass to a good pass. As with keywords, the main advice for catching detail is

the same. Read the question. Once you have captured all the major content, think broadly around the definitions of all the keywords. For example, if you are asked a question on the drugs used in the management of pre-eclampsia, your major content will be down the line of the classic anti-hypertensive agents and magnesium. If you then look back at the question and think to yourself 'What other drugs do I regularly give patients with pre-eclampsia?' it won't be too long before you come up with the answer that you insert an epidural and give bupivacaine. This gives you a whole new avenue to explore and will score you extra marks.

Should I use references?

Most people are aware of a colleague who is a walking version of PubMed; able to drop perfect references in to back up all conversations about controversial topics. Most of us do not work this way and the choice of whether or not to add relevant references into an SAQ may cause anxiety. This also has relevance for revision. Should you be memorising all those references or using your time and brain units for something else? Let us consider an example:

For the question 'What is the ideal haemoglobin level for a patient on the critical care unit?' the following options are available when attempting your 'Phrase that pays':

- Studies have shown that a haemoglobin of 7g/dl is associated with improved outcome.
- In April 1999, The Canadian Clinical Trials Group showed that a haemoglobin of 7g/dl is associated with improved outcome.
- Studies have shown that a haemoglobin of 7g/dl is associated with improved outcome. (Multicenter, Randomised, Controlled Clinical Trial of Transfusion Requirements in Critical Care Canadian Critical Care Trials Group, *E Bi Gum*; 341:309–317, Feb 11, 1999.)

The third option is not only the work of madness, it is also incorrect. Attempting to put anything like full references into an SAQ is to be discouraged. The first and second options are both acceptable, and would probably score you similar points. The second option creates the impression that you may have actually read some landmark papers and drawn your own conclusions on their content. Such papers as MAGPIE, ENIGMA 1 and POISE are just a few of a number of landmark papers in recent years. Important papers are referenced at the end of each marking plan and we would recommend you have a look at them. It is quite acceptable to drop the year of publication followed by either the title or principal author into your answer.

Should I use abbreviations and acronyms?

Abbrevs. are usfl. tm'svrs. but can b. pot. annoying. They therefore need to be used sensibly. The first encounter should be as full text (unless its use is very widespread such as INR) followed by the shorter version in brackets. After that it would be acceptable to use the abbreviation or acronym throughout your answer.

Are handwriting, spelling and grammar important?

It is now quite reasonable for an examiner to withhold some of the 2 marks out of 20 assigned for each question for clarity, judgement and the ability to prioritise if the presentation is poor. You will be allowed a certain amount of poor handwriting as the examiner understands that you are writing under extreme conditions. If, however, your writing is deteriorating to the point where it is making the examiner's work difficult to extract meaning from your text, then you may lose marks. In extreme cases we have known of high-quality candidates failing the exam and, on appeal, when their paper was reviewed it was widely agreed to be illegible.

Poor spelling and grammar may potentially annoy the examiner. Some will be more pernickety than others. This may come as a shock to you but an examiner will not scrutinise every word of every answer you write. What poor spelling and grammar may do is alert the examiner to the fact (often incorrectly) that you are a weaker candidate. This is a bad thing to do as they will scrutinise your work closely and may choose to not give you the benefit of the doubt on an answer where you are mainly right. Do whatever you can to avoid annoying the examiners. Writing, spelling and grammar assessment is another very good reason to do some practice papers under exam conditions and show them to a senior colleague.

Is it essential to stick to time?

Yes! This is very important. Let us consider the circumstances under which you might be tempted to spread the time unevenly. You look at the paper and notice a question in an area in which you are very strong and another where you feel you are pretty clueless. You think that you might write a cursory answer for the difficult question ensuring a '1' mark, and try to make that up by writing a 28 minute answer in your strong area to achieve a '2+'. This averages you out to the equivalent of a '1 +, 2' performance and would keep you in the game. The problem here is that it is much more difficult to predictably convert a 2 to a 2+ than a 1 to a 1+ or even a 2. You have to hit the examiner's marking sheet with most of the essential and desirable content to get near a '2+'. Most questions that you think you are clueless on will unravel during the 15-minute writing process and you will get plenty of good-quality content. This especially goes for non-clinical questions that may initially look daunting. A little thought and organisation will often allow you to mine a rich vein of content.

How much should I write per question?

Different people write different amounts with a wide range of precision and content in 15 minutes. You must find out what you are capable of. This is another good reason for using this book because it may be evident after a few essays that you have the wrong approach. There are a few generalisations that can be made. Content is king. You have to put enough correct content down to score a threshold mark to pass a question. This is unavoidable. It is difficult, unless you are unfeasibly succinct, to record enough content in fewer than 100 words. In general, essays we see on the Crammer with 40–80 words are written by the weaker candidates and lack content. They almost invariably score low. If following a practice paper you realise that you are only writing 65 words per 15-minute essay, then there are two likely explanations. First, you did not know enough to write more. This has an easy solution, which is learn more. Second, you may have known plenty, but were unable to write more in 15 minutes. This may occur throughout the paper or as fatigue sets in towards the end. This also has a simple solution and that is practice writing loads more essays.

On the upper end, we will see candidates on the course write 300–350 words in 15 minutes. If this is your style, your answers are content-heavy, well structured, consistent throughout the paper and do not run over time, then I would not discourage you from this practice. However, we will often find that the high scores on any given essay may be the ones with a 120-word answer ramming all the point-scoring content in succinctly. High-word-count essays usually run to three or four sides of A4. It is often the case that there will be half-side patches that score absolutely zero as the candidate may be off the point or writing a long-winded introductory paragraph. This is time wasted that should be spent firing down content elsewhere. Overblown, wordy answers will also not help you score the 2 extra points per essay allocated for clarity, judgement and the ability to prioritise.

How should I divide my time within one question with multiple parts?

Since October 2004, the College has shown the percentage marks available for each part of a question. Broadly allow 1 minute per 10% of marks. Be vigilant on questions such as:

'A patient on the ICU, who had cardiac surgery completed 3 hours ago, is still intubated.

a) What clinical features might suggest the development of acute cardiac tamponade? (55%)
b) How might you confirm the diagnosis? (5%)
c) Outline your management of acute cardiac tamponade? (40%)' (*from Oct 2004.*)

To waste more than a sentence or two on part b) would be inappropriate, even if it is the subject of your PhD thesis.

How do I deal with my own irrelevant thoughts

Sometimes on first appearance a question may fire off a multitude of thoughts in your brain; it is important to try to keep your answer relevant to the question. A good discipline is to ask yourself 'What does this question include and what does it exclude?' This means that, for instance, if you receive the question 'Describe the features of the anaesthetic machine which are intended to prevent the delivery of a hypoxic mixture to the patient' (*Oct 2001*), it is only about hypoxic mixture and not about other safety features. It is also about the whole anaesthetic machine including everything from pipelines to the common gas outlet. This momentary check will stop you wasting time with irrelevancies and stop you missing important areas of content.

What should I do if a question is 'dodgy'?

Every once in a while a question appears in The Final which is ambiguous or contentious. This is a rare occurrence but does still happen. Our advice if you are concerned about a question is to carry on writing but raise your hand. Ask the examiner about your area of concern. Do not get into a heated discussion, but make your concerns known. Examiners have to log all enquiries during the exam. If enough people raise concerns about a given question it will be reviewed and may be removed from the final marks. This process should waste as little of your time as possible and it is vital that you still write an answer. Try to cover most bases superficially.

Diplomatically point out ambiguities or contentious areas when phrasing your answer.

What happens if I turn the paper over and I see an unanswerable question?

This is the nightmare that most Final FRCA candidates have at some point. You wake up having just imagined turning the paper over to find 'What are the special features that need to be considered when preparing to intubate someone with Bonzini's syndrome?' The reality is that this will not happen. If you have revised in anything like a sensible and diligent way, you will be able to start writing something for all the questions. It is not in the College's interest to put esoteric questions into the exam as they do not test the field effectively and they may have to remove the question from consideration. It is a common nightmare, but it will not happen. Revise hard and sleep easy.