ON TAKING EXAMINATIONS

PETER V. SCOTT

This article sets out to give practical advice of the common-sense variety. I hope that it will encourage the anaesthetist working for a higher diploma to make the most of his knowledge so that his answers, whether written or spoken, will be inspired with a force and logic which they might not otherwise have had. It is not always facts which are at issue but the way in which those facts are organized and put across; I try to show how this can best be done. Some of the advice verges on the obvious, but there is no need to apologize for that: what is obvious to one may not be obvious to another. Besides, it is remarkable how often the obvious is just what is wanted.

PREPARATION
Examinations are not lotteries. The secret of success lies in preparation. Bluff and luck are no substitute for work—and this means organized work. Work to a system. Draft a timetable to cover the weeks ahead, bringing the whole field of the examination under scrutiny, revealing omissions or, more commonly, over-emphasis. These can be put right. Many young doctors seek to burden themselves with “small-print”: why, is a mystery. They should first master the general principles and the workaday; the outlandish and the recondite are best left until after the vivas.

In the author’s view, it is impossible to absorb information by lounging in an easy chair in front of the fire. It is best to sit at a table and make notes, even if you throw them away afterwards. Reserve the first hour “at the books” (when the mind is fresh) for a single-minded attack on a new or difficult subject. Talk over any problems later on with someone more experienced. Spend the second hour on something more familiar: a personal interest, perhaps. Finally, revise a well-known topic. Do not try to read a textbook from cover to cover—the surest way to boredom. From time to time, share your troubles by studying with friends. Decide in advance the subjects for discussion and come prepared. Sooner or later, test your ability to put down knowledge on paper under examination conditions.

Candidates from overseas are not always able to express their thoughts in plain English (nor are the English). For advice on how to use words, and what words to use, the reader can do no better than consult The Complete Plain Words by Sir Ernest Gowers; and, of course, for the last word, Fowler’s Dictionary of Modern English Usage.

Bookwork and practice in writing are only a part of the story. An anaesthetist is first and last a clinician, and will be judged as a clinician. The difficulty is that clinical experience can only be organized up to a point; there are bound to be gaps. These should be filled by arranging to attend the appropriate operating list, out-patient clinic or pre-operative ward round, and by making the most of study days and study leave. “Never volunteer” does not apply to hospital doctors in training. Wait about on the off-chance that something interesting will turn up. It often does.

Most teaching centres now run courses in basic medical sciences and in clinical subjects, and there can be few hospitals without regular departmental anaesthetic meetings. Do not merely sit back and listen. Present an interesting case, review an article from the literature, or speak from the floor, striving always to gain practice in the art of “thinking on one’s feet”—an art much in demand at examination halls. Further experience will come from working in a milieu where every thought is questioned and every move criticized. The candidate must decide for himself where this Socratic method of teaching can best be found.

THE WRITTEN ANSWER
Sad to relate, too many answers can only be portrayed as the unreadable in hot pursuit of the unbelievable. No one should expect an examiner to condone a scrawl that is also, in all probability, tedious and irrelevant. The secret of good writing is to have something to say and to say it: concisely,

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vigorously, graphically. To imagine that this happens without thought and planning is, at the least, ingenuous.

Read the questions. Read them again—and again—and again. It is not possible to say this too often. I repeat: read the questions. Then ask: What are the basic principles at stake? What is the question getting at, and why is it phrased in one way and not in another? Is there some hidden relevance? If there seems to be ambiguity, despite every effort by the compilers, what is the most likely interpretation? Resolve these problems before making a final choice of questions. Then plan the answers.

Why bother to make a plan? Not everybody does, a fact easily verified in any examination room. Yet, without a plan, the answer, as likely as not, will turn out a hotchpotch, giving an impression of illiteracy and muddle-headedness. Important facts fester under a welter of verbiage or surface at some inappropriate moment. Lay out a plan of campaign on scrap paper. List facts, assign priorities and draft opening and closing paragraphs. If this vital groundwork is not laid now, it never will be. Complete a plan for every question before starting to answer the first. This should take about 10–15% of the available time. “Tell them what you’re going to tell them; then tell them; then tell them what you’ve told them.”

Every piece of writing needs an introduction. The opening paragraph tells the reader, in broad outline, what to expect. It is an opportunity to put a question into historical perspective, to define terms and to resolve ambiguity. Be brief and to the point; lead the reader naturally into the main body of the answer with what is, in all essentials, a series of extended newspaper headlines. Having once grasped the essentials of a question, do not waste time and space on trivia, small-print or irrelevance. When there are two points of view (and when are there not?) adduce the evidence for both and come down on one side or the other, giving reasons. Finally, and most important of all, lay out the answer legibly and neatly, so that it can be taken in almost at a glance. The examiner looks for signposts to guide him in his marking: why not make it easy for him? (See fig. 1.)

Do write paragraphs. Introduce them with underlined headings, and separate them one from another by at least one clear line. Vary the length of sentences, erring on the side of brevity. Don’t ramble or pad, faults which irritate and waste time. Draw attention to important points by underlining, but don’t overdo it. Don’t abbreviate. Some contractions are particularly bad, such as “C.N.S.” and “C.V.S.” for central nervous system and cardiovascular system. On no account use “etc.”. This will be taken to mean that knowledge and imagination have failed, or to imply that any other comment is superfluous, than which nothing could be further from the truth.

In writing about a drug, use its pharmacopoeial or approved name rather than its proprietary name (or names). When discussing dosage, remember that the proper dose of a drug is the effective one; this naturally varies from patient to patient, and even in the same patient at different times. If you cite a particular dose, you should indicate the sort of patient it is intended for, and the effect you expect it to produce. Thus: “. . . mg is the average dose for a fit adult of 70 kg and will produce . . . effect.” You might add a rider which takes individual variation into account: “. . . a given dose may be too much or too little. Ideally, the efficacy of a drug is measured by the patient’s response to it.”

Try to approach any question in pharmacology or therapeutics in a logical way. Show how the drug is administered, absorbed, distributed, metabolized and excreted. Describe how each of the body systems reacts to it. Mention the side effects and interactions with other drugs, and emphasize potential hazards to the foetus which may follow placental transmission.

Assuming a good knowledge of anaesthetic literature, is it worthwhile to quote? It is true that any answer must derive from original work; a question on alleged halothane hepatotoxicity would be inconceivable without a passing nod at the National Halothane Study. On the other hand, it would be a mistake to drag in a reference just as an exercise in one-up-manship, and potentially dangerous should one of its authors happen to be an examiner. Avoid also the temptation to add a final touch “for the sake of completeness”. These few sentences will inevitably be written at the expense of time better devoted to the next answer. The best policy—the only policy—is to spend the same time on each question.

Some answers can be improved by illustration. Diagrams and graphs should depict only what you want them to and nothing more. They should be simple, large and well-labelled. A touch of colour lends emphasis.
A biro, B = pen and ink; both written by the same hand. The content of A and B is identical, apart from insertion of paragraph headings. Only the layout differs.

(i) Underlined paragraph headings.
(ii) First lines of paragraph well-indent from margin.
(iii) Increase in number of paragraphs.
(iv) Paragraphs separated by at least one clear line.
(v) Keyword ("Lundy") underlined.
(vi) No crossings-out.
(vii) Improved legibility with pen and ink.
(viii) General impression promotes interest.

**CONCLUDING PARAGRAPH**

There is nothing worse than to let the answer tail away into nothingness. The closing paragraph gives a chance to reinforce good impressions or dispel bad ones. As vital as the opening paragraph, if not more so, it enables the writer to tie up loose ends, draw conclusions, air opinions and discuss practical implications. The time has come to disclose a confidence: you are an anaesthetist. Relate your answer to the practice of anaesthesia and to the problems facing the anaesthetist. After all, what else is the examination about?

Finally, read through each answer minutely. Correct spelling and grammar, and check the sense of what you have written. Then put the matter out of your mind.

**MULTIPLE CHOICE**

This, the latest hurdle in the examination stakes, poses new problems. Those who have tried to set a multiple choice question paper will know how difficult it can be. In the first place, there is the technical matter of finding a question to ask, and of seeing that the right answers are indeed right, the wrong ones wrong; and, clearly, it must not be too obvious to the candidate which are which. Secondly, the phrasing of a question must convey beyond a peradventure precisely what is in the examiners' mind, without a possibility of ambiguity. Every word is thus weighed in the balance: it is an exercise in manipulation of the English language. This preamble is merely to emphasize how important it is to read the questions!
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It is equally important to read the instructions! Each candidate receives a copy of the rules well before the examination. If there is still doubt, as there well may be, write to the Examinations Secretary, or ask an examiner on the spot. The suggestion is made that you should first indicate the correct answer on the question paper, and then transfer it to the answer sheet. This is probably a good idea; but remember to leave yourself enough time. You will need anything from 30 to 45 minutes.

At the time of writing (March 1972), marks are deducted for wrong answers. It is possible to achieve a minus score. By and large, this means that it is preferable to leave an answer square blank if you are uncertain, and not to guess. It is helpful, and boosts morale, to go right through the paper answering the easier questions, and then to concentrate on the more difficult ones. Some of these may be laid out in groups, rather like the childhood game of “Consequences”. The consequences may well be described as nothing short of a disaster if you start off on the wrong foot. Consider the group as a whole; it is then sometimes possible to detect inbuilt clues whose correct interpretation will lead to the right decision.

Revise each answer and confirm that the boxes have been correctly filled in—particularly if you have transcribed them from the question papers.

There are several good books on the theory and practice of multiple choice questions. One of the best is by Roddie and Wallace (1971).

THE CLINICAL
It is invidious to lay down any hard and fast rules about the clinical examination, because no one person resembles another in his reaction to meeting the examiners face to face. Apprehension there will naturally be, but “apprehension can become exaggerated to the point of ineffectuality”. The motto is: while there’s life there’s hope. Ideally, the approach is one of quiet self-confidence, buttressed by thorough preparation, a smart suit, a quiet tie, clean shoes, short hair, a good night’s rest, and sweet breath (pack a toothbrush, and avoid garlic and onions for at least three days beforehand). Add to the appearance of professionalism, maturity and sobriety by carrying your own stethoscope. If the examiner lends you his, don’t walk off with it.

Patients differ in their response to meeting examinees. Some are more than helpful; others keep to what they regard as the letter of the law and refuse to answer leading questions. There is an element of luck about it which examiners understand and allow for. Try to elicit a short relevant history, concentrating on matters important to the anaesthetist. Make a systematic physical examination in the usual way, paying careful attention to the cardiovascular, central nervous and respiratory systems, and to points of interest brought out by the history. As you are doing so, remember always to ask: How can I best manage this patient should he need an operation? What would improve his general health? What preoperative investigations and treatment would be helpful or essential? Would general or local anaesthesia meet the bill? What precautions should be taken during anaesthesia, and what monitoring or other apparatus (the “hardware”) would I need in the operating theatre? What are the likely postoperative complications? What would be the most appropriate or enterprising form of postoperative analgesia?—and so on. Think clinically. Treat the patient as a person and not as a cipher. Do not forget to feel the pulse, take the blood pressure, look at the optic fundi and measure chest expansion with a tape rule. Make a few notes to guide you when presenting the case to the examiner.

THE VIVAS
In the vivas, a candidate’s personal qualities come to the fore. What they should be the writer would not presume to say; an impossible combination, perhaps, of deference and wit, firmness and compromise, with an indefinable “presence”—not to say presence of mind. These things should be nurtured, for they cannot be taught.

One piece of advice, however, is worth having: answer the questions! They are usually straightforward. There is no need to imbue the examiner with diabolical cunning. Failure comes, if failure must, from simple things. For example, the immediate reply “malignant hyperpyrexia” to a question on the common side effects of suxamethonium is not only stupid but perverse. Resist this temptation to indulge in “small-print”. Channel the interrogation into quiet waters of your own choosing, if this is possible—and it often is. Do not introduce topics which you are unable to pursue. This will only justify an alert examiner in taking the matter further, a disquieting thought. If you have not heard a question, or do not know the answer, say so. Don’t guess. Don’t hedge. Don’t mumble. Don’t interrupt the examiner, and don’t argue with him unless he invites you to do so. Try not to be too dogmatic. Think before you speak. Answer succinctly and relevantly.
Don't change your mind about an answer just because the examiner raises his eyebrows. And finally, remind yourself that despite appearances the examination is there to be passed. "Stand up, speak up, and shut up."

CONCLUSION
It is a comfort to reflect that examinations are not the be-all and end-all of life. The fascination of anaesthesia begins when they are over and done with. Until then, the object must be to work steadily and conscientiously over the weeks and months and not to cram everything into the last few days. Then is the moment to put the books aside and thrust the prospect of the examination into the background. More easily said than done? Well, if you feel that you really must read something, why not take up a volume on the history of anaesthesia? Not only is this relevant and amusing in its own right, but, with luck, there might even be a question on it!

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FURTHER READING

CORRESPONDENCE
ANAESTHESIA FOR BLADDER INFLATION THERAPY
Sir,—Complete necrosis of tumour tissue in the bladder wall can frequently be achieved by increasing the intravesical pressure for several hours, as described recently (Helmstein, 1972).

The pressure is applied: (a) directly by the instillation of water through a catheter; or (b) by the inflation of an indwelling balloon introduced via the urethra.

Intravesicular pressure is maintained for 8 hours between systolic and diastolic blood pressures by the adjustment of the pressure in the pressurized bottle connected to the bladder. Bladder distension of this degree produces intense pain, so that a method of producing complete pain relief for this period of time is indicated.

In the original article, a high epidural block is employed on the grounds that the resultant total bladder atony carries less risk of bladder rupture. We consider that the use of a high epidural block is unnecessary, as the nerve fibres mediating the pain of bladder distension and motor fibres to the bladder are considered to run in the 2nd, 3rd and 4th sacral nerves, although some authorities describe pain pathways via the 1st and 2nd lumbar nerves. We also consider the risk of profound arterial hypotension to be considerable with high epidural anaesthesia.

We find that continuous lumbar epidural blockade provides excellent analgesia for this procedure with the production of minimal hypotension.

We use a papaveretum and promethazine premedication. After inserting an intravenous needle, a catheter is introduced in the lumbar epidural space (usually at the lumbar 2/3 level) via the Tuohy needle. After a 2-ml test dose, 15 ml of 0.5% bupivacaine is injected with the patient on his side. Light general anaesthesia is induced for placement of the urethral catheter and balloon assembly, permitting the rapid recovery of consciousness and assessment of pain. Usually two further doses of 10 ml 0.5% bupivacaine are required for the 8 hours of bladder inflation.

The patient is kept in the recovery room for the duration of the procedure, when the balloon attached to the catheter is withdrawn and an ordinary catheter is inserted into the bladder after a bladder washout.

During the period of treatment, blood pressure is recorded every 15 minutes and the intravesicular pressure is adjusted accordingly.

We have treated six cases using this technique and were able to maintain a comfortable, conscious, pain-free patient with bladder pressures maintained between 80 and 100 mm Hg.

We think that comfortable pain-free management during the inflation therapy is essential, hence we have adopted the above technique and noticed no untoward effects so far.

We should like to thank Mr M. Roberts, CH.M., F.R.C.S., Consultant Urologist, Southmead Hospital, Bristol, for his advice, encouragement and for allowing us to carry out the above technique on patients under his care.

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REFERENCE