MCQ Tutor for the MRCGP Exam

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Some questions have been adapted from questions A.J.M. originally composed for *Doctor* magazine's 'Ten minute test' and we should like to thank the editorial staff and readers of *Doctor* for the many helpful and constructive criticisms that they have made in the past.

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INTRODUCTION

The Multiple Choice Question Paper or MCQ

Over the course of many years MCQ papers have become established in nearly all branches of medicine as an effective and reliable means of assessing examinees' performance. They are mainly concerned with testing factual knowledge and recall and if well constructed are able to provide a reproducible assessment of knowledge which can accurately discriminate between candidates.

At present the MCQ paper is one of the five major parts of the MRCGP exam and, as such, is worth one fifth of the total exam marks. It is possible that at some stage in the near future it may become separated from the rest of the exam to constitute MRCGP, Part One, the passing of which will be an essential prerequisite to being allowed to sit MRCGP, Part Two, at a later date.

In the paper 90 questions, each of five parts, have to be answered in a total time of three hours. Each question is of the multiple true/false variety and consists of a stem statement followed by 5 items or completions, e.g.

Known risk factors in cardiovascular disease include: (STEM)
A. Hypertension.
B. Living in a hard water area.
C. Regular sustained exercise.
D. Hyperglycaemia.
E. Long-term taking of the combined oral contraceptive pill.

5 items or completions

The stem statement should be considered in turn with each item to produce the 5 complete sentences requiring individual 'true/false/don't know' answers. When answering the question posed by the stem and one item together all the other items should be disregarded. They should not give any clues to the correct answers and may confuse the issue.

In the example given the answer is 'true, false, false, true, true', but it is important to note that any combination of true and false may occur and there is nothing to prevent all items being true, or equally, all being false.

A total of 450 answers have to be given in the 3 hours allotted and most candidates find that this is the only part of the exam where they finish with plenty of time to spare.

The proportion of the 90 questions devoted to the different areas of general practice knowledge is obviously important, as it should influence the time you spend revising each subject. Currently the College say the breakdown of questions is as shown below:

General medicine	20
Psychiatry	18
Obstetrics and Gynaecology	12
Therapeutics	10
Paediatrics	10
Surgical diagnosis	5
Ear, nose and throat Ophthalmology Dermatology	10
Community medicine	5
	90

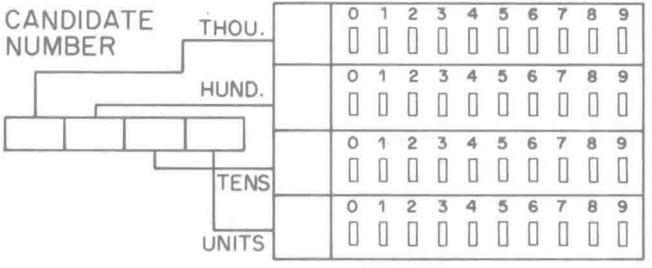
It is important to note that this is only a very rough guide and in fact the proportions change from exam to exam. Recently, Paediatrics and Therapeutics questions have markedly increased in number at the expense of Psychiatry and Obstetrics. Whatever the actual individual breakdown among the first five subjects listed may now be, it is fair to note that the second 5 subjects listed account for only 20 of the 90 questions. Therefore it would be reasonable to spend only a little time on their revision.

The question paper itself is in book form but is computer marked by photoelectric scanner. Answers therefore have to be recorded on separate computer marking or 'opscan' sheets (*see* Fig. 1). Each question part has its own true/false/don't know boxes only one of which has to be shaded in with the Grade 6B pencil provided. The computer will select the most heavily shaded box as the given answer and will reject any paper where all the answer boxes to a particular question have been left empty. This is because the document reading machine checks its efficiency by making sure that it has sensed a pencil indication for each response.

Also note that the answers on the 'opscan' sheet alternate in column, i.e. odd numbers are down one side of the sheet and even numbers down the other. This can be quite confusing and in the exam it is best to write your answers on the question books in the first instance before transferring them carefully to the answer sheet.

The most important point to remember about this paper is that it is marked on a negative marking system. This system is designed to correct for random guessing so that the candidate who knew nothing about the subject and guessed the answers to the questions would on average get half right and half wrong giving a total score of 0.

SURNAME	INITIALS



PAGE No.

1

T means TRUE F means FALSE D means DO NOT KNOW

1	1A	1B	1C	1D	1E
	T F D	T F D	T F D	T F D	T F D
3	3A	3B	3C	3D	3E
	T F D	T F D	T F D	T F D	T F D
5	5A	5B	5C	5D	5E
	T F D	T F D	T F D	T F D	T F D

2	2A	2B	2C	2D	2E
	T F D	T F D	T F D	T F D	T F D
4	4A	4B	4C	4D	4E
	T F D	T F D	T F D	T F D	T F D
6	6A	6B	6C	6D	6E
	T F D	T F D	T F D	T F D	T F D

Fig. 1

Random guessing may therefore be penalised with valuable marks lost and your approach to answering should be influenced by this. Of course with many questions you may well have a reasonable idea of the answer, although you are not certain, and in this situation inspired guessing has been shown to improve candidates' marks.

As previously stated the time allowed for this part of the exam is ample and it is feasible to go through the paper answering all the questions you are sure of. By this I mean both those that you are sure you know the answer to and those you are sure you neither know the answer nor will be able to work it out, which you will mark in as 'don't knows'. At the end you can add up all the questions you feel certain you have scored marks for. If your total is more than 275 (this would give you 61% if they were in fact all correct but allows you some leeway for errors as the exam pass mark is 55% or so) then you could fill the rest of the paper in as don't know and avoid guesswork of any sort.

So much for the general style of the paper. Now it is worth briefly considering the questions themselves as they can sometimes pose problems. Each part of a question should only be testing one item of knowledge and should use words that are easily understood. Testing of English language knowledge is not an aim and stems and items should be unambiguous. Unfortunately some questions which appear clear to nearly everyone can appear ambiguous to someone who may have a far more detailed knowledge of an individual field than the question is trying to test or who may just not see what the question is trying to get at. The only advice I can offer in this respect is that there are no trick questions and that they should all be taken at their face value. If there is genuine doubt in your mind then it is probably safest to mark in a 'don't know'.

In general, words like usually, often, commonly, rarely, frequently, sometimes etc., are too vague and will not be used (if they are then they can only be fair if the correct answer is unequivocally 'false') and over-emphatic words such as always or never will also tend to be avoided, as little in medicine is so absolute (if they are used the answer is again likely to be 'false'). Standard terms that have evolved for use in stems, to help overcome the problems of ambiguity, include:

In the majority	implies in at least 50% of cases.
A characteristic feature	one which occurs so often as, usually, to be of some diagnostic significance and if not present, might lead to doubt being cast on the diagnosis.
A recognised feature	is one that has been reported and that is a fact that a candidate would reasonably be expected to know.

A typical feature is one that one would expect to be present.

Thus all *characteristic* features are *recognised* but many *recognised* features could not be described as *characteristic*.

If a stem or item does cause confusion then the standard computer analysis of the paper will pick it up and produce an amended score for the question and also allow that question to be replaced in the future. Thus the College's bank of questions is continually being refined to produce ever fairer degrees of discrimination between candidates. Finally, a summary of advice:

1. Read each question carefully. This may seem obvious but avoidable errors can occur when a question is read quickly and answered without reflection.
2. Remember you are considering the stem and one item together. Disregard the other items in the question as they have nothing to do with the one you are concentrating on.
3. Answer each item as 'true', 'false' or 'don't know' and make sure your answer is clear and in the correct box.
4. DO NOT GUESS RANDOMLY. Questions you genuinely have no idea about mark as don't know and move onto more. productive areas. Those that you think you could work out either consider there and then or leave and come back to at the end.
5. Accept questions at face value. Do not look for hidden catches or tricks. The examiner is not trying to confuse you and the obvious meaning of his statement is the correct one.
6. Depending on your temperament either go through the whole paper filling in the questions you are sure of and then come back to the others at the end *or* systematically work your way through the whole paper. The first method has the advantage of ensuring that there are no questions you could have answered left over at the end (if you run out of time) although it does require a fair deal of mental agility. It also allows you to add up the number of 'correct' answers you are reasonably sure of and assess whether you need to guess some.
7. If you have time to spare at the end check you have put down the answers you meant to and ensure they are in the correct boxes.

Undoubtedly correct technique in the MCQ will help you not to lose marks. Your aim should be to get a comfortable pass rather than to try for a high mark by potentially counterproductive guessing.
Further MCQs may be found in:

1. *The Multiple Choice Question in Medicine.* Anderson. Pitman, 1976.

2. *The MRCGP Examination (A Comprehensive Guide to Preparation and Passing)*. Moulds, Bouchier-Hayes, Young. MTP, 1978.
3. *MRCGP Study Book*. Fry, Gambrill, Moulds, Bouchier-Hayes, Young. Update Books, 1981.

How to use this book

To derive maximum benefit from self-assessment in this form do not attempt too many questions in one sitting. To this end, the first 180 questions have been assembled in six 30 question groups or tests. Under exam conditions one hour would be allowed for each of these groups and so 6 realistic tests may be done, possibly weekly, during your pre-MRCGP studying period.

A full 90 question mock exam (Test 7) completes the content of the book and this would be best done, again under strict exam conditions, especially as regards the time allotment of 3 hours, about 6-8 weeks before you are due to sit the exam MCQ to give you a realistic foretaste of what will be involved.

Try to avoid looking at the answers to questions before making a definite choice of your own and mustering arguments in its favour.

We have attempted to make the subject matter of our questions reflect the content of the current MRCGP exams and also to make the questions themselves interesting and relevant to current practice. Obviously there may be one or two answers you will disagree with but before dismissing them please check them for yourself as we have tried very carefully to validate them all.

Part I

SIX TEST GROUPS

Each of 30 questions and answers

TEST 1

1.1 Herpes zoster (shingles):

A. Does not occur in people who have had chickenpox in childhood.
B. Is not infectious.
C. Does not cause pain until the rash appears..
D. In the majority of cases will produce constitutional upset.
E. If involving the ophthalmic division, is always serious or potentially serious.

1.2 BCG vaccination:

A. Should be given intramuscularly.
B. Offers some protection against leprosy.
C. May cause an ulcerated lesion which responds better to topical isoniazid than to the orally administered drug.
D. Is effective in the newborn.
E. If positive, produces a skin flare.

1.3 In the examination of the eye:

A. A myopic (short-sighted) eye requires more 'plus' on the ophthalmoscope for clear focus.
B. Normal visual acuity on Snellen's chart is 6/6.
C. 1% atropine drops are most appropriate for dilating a small pupil prior to ophthalmoscopy.
D. By testing the movement of the lids, one has a clue to the integrity of the third and fifth cranial nerves.
E. The optical conditions in hypermetropia are such that the retinal image is enlarged.

1.4 Ptosis:

A. Implies an inability to elevate the upper eyelid completely.
B. Is always due to a weakness of the levator palpebrae superioris.
C. Can cause a reflex overactivity of the frontalis muscle.
D. If due to sympathetic involvement, is associated with increased sweating on the same side of the face (Horner's syndrome).
E. If bilateral, may be due to hysteria.

Answers overleaf

1.1
- **A. False.** As shingles is caused by a reactivation of the latent virus, having had chickenpox is a prerequisite not a protection.
- **B. False.** Healthy contacts may develop chickenpox.
- **C. False.** Pain precedes the rash by a few days.
- **D. False.** Usually none though some patients may get headache, malaise and possibly fever.
- **E. True.** Trigeminal herpes may lead to blindness from corneal scarring or a panophthalmitis.

1.2
- **A. False.** Intradermally.
- **B. True.** It does.
- **C. True.** 5% in an ointment base is best.
- **D. True.** BCG should be given to infants born into a family where a parent or close relative has TB.
- **E. False.** It produces a small ulcer.

1.3
- **A. False.** More 'minus' is required.
- **B. True.** $\frac{6}{5}$ would also be considered normal.
- **C. False.** The effects are unnecessarily powerful and prolonged. 1% cyclopentolate is probably best.
- **D. False.** Third and seventh nerves (also the sympathetic) are tested.
- **E. False.** Is enlarged in myopia where it may help to examine the patient with his own glasses on.

1.4
- **A. True.** Along with the drooping it is essential for the definition.
- **B. True.** It is.
- **C. True.** Gives horizontal furrowing of the forehead which is an attempt to minimise the ptosis.
- **D. False.** Lack of sweating characterises Horner's syndrome.
- **E. False.** Hysterical ptosis is always unilateral and marked.

1.5 Psoriasis:

A. Always starts in childhood.
B. Is not familial.
C. Characteristically affects knees and elbows.
D. As it remits may leave scars on the skin.
E. If chronic in the genital area may lead to malignancy.

1.6 It is correct to say that:

A. Port wine stains (capillary haemangiomata) disappear spontaneously as the child grows up.
B. Strawberry haemangiomata do not disappear spontaneously with ageing.
C. Keloid formation in scars is more common in coloured that white races.
D. A senile freckle is not premalignant.
E. A sebhorrhoeic wart may give rise to a basal celled epithelioma.

1.7 Diverticulitis:

A. Like carcinoma of the rectum, may present with bleeding PR.
B. Has no associated mortality.
C. May present with constipation but not diarrhoea.
D. Is easily confirmed by sigmoidoscopy.
E. In the majority of cases will ultimately need surgical treatment.

1.8 The following may be of value in the treatment of gravitational leg ulcer:

A. Occlusive dressings
B. Elastic stockings applied in the morning when the feet are elevated.
C. Zinc supplements.
D. Quinine sulphate at night.
E. Regular local antibiotic application.

Answers overleaf

1.5
A. False. It may start at any age, though usually 5-25.
B. False. Risk for child with one affected parent is 25%.
C. True. And spares the face.
D. False. No marks or scars and skin returns to normal.
E. False. No association with malignancy.

1.6
A. False. No effective treatment exists, other than cosmetic creams.
B. False. 90% resolve by age of 8.
C. True.
D. False. Malignant melanoma will arise in 10-14 years.
E. False. Not premalignant.

1.7
A. True. Although less frequently. The two conditions may coexist, which adds to diagnostic difficulties although colonoscopy is proving a useful aid.
B. False. Causes about 500 deaths a year in England.
C. False. Either or both may occur.
D. False. Often not revealed by sigmoidoscopy. Diverticula show up best on barium enema.
E. False. Majority need medical management only.

1.8
A. True. Helpful once ulcer is clean and patient is ambulant.
B. True. Put on before patient gets up.
C. True. Zinc deficiency may be a factor in delayed healing.
D. False. No effect.
E. False. Risk of local allergic reactions and development of drug resistant bacteria.