

Practical Guidance for Writing Single Best Answer MCQs

A GOOD SCENARIO

- Allow 90 secs per question – this will guide what goes into the question
- Set in authentic clinical contexts – think about patients you've seen.
- Addresses range of topics, diseases, clinical contexts (over a number of qs)
- Emphasises the more important LOs/topics.
- Uses non-identifiable data and investigations.
- Follows the house-style for presenting the information (see below).

House style for scenario (Each institution should develop this list further with specifics)

- Good structure, 30-120 (max 150) words, concise description using present tense, no immaterial facts, does not deliberately mislead or include bad practice.
- Includes information on some of the following in this order:
 - age, gender (man/woman/boy/girl), symptoms, duration, the setting IF relevant, relevant past history, family history, social history
 - Presents examination findings in this order:
 - temperature, pulse e.g. 90 bpm, blood pressure, respiratory rate e.g. 20 breaths per minute.
 - Mini-mental state examination and Glasgow coma score
 - Physical findings giving positive/abnormal findings first
 - Results and investigations in logical, standardised order giving normal ranges. (Appendix Word document has these normal ranges.)
- Describe signs and symptoms of a clinical state e.g. dehydration, rather than the medical summary.

Data and images

- Add data / images where possible and relevant, rather than report findings only.
- To access teaching images/photographs in NHS Lothian you can seek a Medical Image Manager User Profile.
Contact: medical.photography@wlt.scot.nhs.uk
- Photographs need explicit written consent
- X-rays can be used IF they have **no** name/ ID, and have **no** additional features such as pathology or jewellery that might identify patient.
- ECGs – basically same rules as for X-rays

A GOOD LEAD-IN QUESTION

- Tests a range of learning outcomes – think of relevant biomedical and social science, ethics etc as well as skills such as diagnosis, clinical management and prescribing.
- Tests a range of **relevant cognitive skills** (recall of causes and drugs, interpretation of results, judgement of likely diagnosis). Avoids small print facts, and favours application of knowledge over simple recall. Students may have to work out the diagnosis *then* recall the management.
- Asks for the single **BEST** answer and not which one is TRUE e.g.
 - *What is the **most** likely diagnosis?* (The other diagnoses may be reasonable but not ‘best’ as agreed by experts.)
 - *What is the **best** description of the process?*
 - *What is the **most** likely site of the lesion?*
- Passes the cover test – i.e. students should be able to answer the question while covering the options
- **Avoids** asking what does **NOT** apply e.g. what is the least likely diagnosis/treatment. Avoids double negatives!

A GOOD SET OF OPTIONS

- Similar in style and length – reasonably short
- Grammatically correct – all flow from the lead-in question without ‘cueing’ the correct answer
- Homogeneous (all treatments, or diagnoses as required by the question)
- All options plausible, familiar to students and possibly appropriate, BUT one is **better** than the others
- BEST (keyed/correct) answer is widely agreed by experts
 - conforms to UK practice and NICE/SIGN guidelines
- Listed in order e.g. alphabetically or numerically as appropriate (but drawback if re-using question)

FROM ONE GOOD QUESTION TO MANY

- If you have just written a question on **diagnosis**, think if you can write more questions with slightly different presentations, accompanying photographs, images, or ECGs for example.
- Then consider if you can write questions on the **management** of each patient in your range of presentations. The management might focus on investigating / **investigations**, **prescribing**, drug interactions, **non-drug treatments** etc.
- And then you can consider the **ethical** issues, **social science** and **biomedical science** aspects of the patients’ situations or the disease processes.