

Answers about Questions

(Developed from the item writing manual developed by the National Board of Medical Examiners
<http://www.nbme.org/publications/item-writing-manual-download.html>)

Question Basics

- Test items must address important content, not trivial facts.
- Test items should assess application of knowledge, not recall of an isolated fact
- Stem poses a clear question focused on one concept
- A good stem is one in which the learner can respond without referring to the answer options.
- Answer options (distracters) are not ambiguous
- Answer options (distracters) are short and are about the same length
- Answer options are homogeneous (similar in structure and concept)
- There should be 4 answer options. The number of options should be consistent for all questions.
- Acronyms should not be used on first reference.

Question Do's

- Questions and answers should be relevant and important to practice.
- The correct answer should be the one answer that a panel of experts would agree on. If a panel of experts could choose several of the answer options, then the answer options are too ambiguous.
- When writing answer options, make sure that the options (distracters) follow both grammatically and logically from the stem.

SIMPLE EXAMPLE: Patient presents with these symptoms, what is the first step in management?

- A. Do an MRI exam
- B. Do a CT scan
- C. Do an ultrasound exam
- D. Administer drug A

Option D is not a logical option when compared to the other options. Persons who are good test takers would have an unfair advantage with this question simply by knowing to throw out illogical answer options.

- Make sure all answer options (distracters) are about the same length. If your correct answer is longer, more specific and more complete than other options, a good test taker will recognize that as the correct answer.
- Put your answer options in a logical order (for example, sequentially)
- Make sure all answer options (distracters) are plausible
- State your numeric data consistently

SIMPLE EXAMPLE: Patient presents with these symptoms. What is the likelihood the patient has a concussion?

- A. 20%
 - B. 30% (rather than 20-30%)
 - C. 40%
 - D. 50% (rather than greater than 40%)
- The use of clinical vignettes is encouraged in question writing (these types of questions require the learner to use what they have learned to solve a clinical problem and they tend to focus on important information).
 - Authors are encouraged to write questions that relate to mistakes that are commonly made.

Question Don'ts

- Don't write true and false questions unless all answer options are absolutely true or false. (This is difficult to do, and true/false questions are not recommended).
- Don't use vague or imprecise terms such as "usually," "frequently," "often," "commonly" "rarely" (the meanings of these terms can be interpreted differently by the author and the learner)
- Avoid negative A type questions (Each of the following is correct except... or which of the following statements is NOT correct).
- Don't ask for the "wrong" answer (i.e. all of the following are true EXCEPT...)
- Don't use "always" or "never" in your answer options. (These words indicate an incorrect answer because "always" and "never" are rare.)
- Don't use "none of the above" as an answer option. When this is included as an answer option, the question basically becomes a true/false question and requires that all answer options be absolutely true or false.
- Don't use "all of the above" as an answer option.

Question Writing Examples

1. Clinical vignette that describes a patient (history, exam findings). Which of the following is the most appropriate screening test?
2. Clinical vignette that describes a patient (symptoms, signs, history, exam findings). Which of the following is the most likely explanation for these findings?
3. Clinical vignette that describes the patient (age, gender, symptoms, signs, history, exam findings). Which of the following is the most likely diagnosis?
4. Clinical vignette that describes the patient (age, gender, symptoms, signs, history, exam findings). Which of the following is the most appropriate next step in diagnosis?
5. In patients with XYZ disease who are candidates for resection, what is the most effective radiology study for preoperative planning?
6. What is the most common cause of XYZ disease?
7. Which imaging technique is the most effective for diagnosing XYZ disease?
8. What is the difference between imaging technique A and imaging technique B for diagnosing XYZ disease?