Constructing Multiple Choice Exam Items

Multiple choice exam questions are a type of selected response item. They are ideal for assessing learning in the cognitive domain, and have the benefit of being quick and relatively easy to grade. This is particularly advantageous for large classes at the introductory level. However, writing quality multiple choice exam items that assess higher-order thinking (application, analysis, and evaluation) is challenging.

The parts of a multiple choice question are the:
- Stem: Identifies the problem or question
- Options: The response alternatives (i.e. A,B,C,D)
  - Key: Correct answer
  - Distractors: Incorrect; but should appear plausible, especially to those who have not mastered content

A quality multiple choice exam item generally has the following characteristics:
1.) Complete, directed stem: It should be clear what the question is asking.
2.) Actions should be in the options, not the stem
3.) Options should all be plausible, but there should be only one BEST answer
4.) Answer options should be similar in length, the shorter the better (if one option is much longer than the others, students will assume that is either the correct answer or blatantly wrong, which gives them better odds at “guessing”)
5.) Watch spelling and grammar! Errors of this sort may cause questions to be “thrown out”
6.) Avoid trivia (only test important concepts, related to course learning objectives)
7.) Use present tense
8.) Shoot for application level or higher on Bloom’s taxonomy
9.) Each question should have only ONE correct answer (it is good practice to write rationales for each option-this will help you later when discussing exam questions with students who may disagree)
10.) Keep options homogeneous/parallel in verb tense etc.
11.) Each exam item should stand alone (having questions build on one another increases the “stakes” and theoretically the point value of successive questions)
12.) Avoid negative stems i.e. “all of the following except” (unless essential to know what NOT to do). If you must use negative stems, it is recommended that you capitalize or underline words such as NOT or EXCEPT (if consistent with your department’s policy). Negative stems require “reversal of thought” and can be distracting for students.
13.) Write out units of measure i.e. mL, mg, mg/dL etc.
14.) Spell out terms when first referenced i.e. nasogastric tube (NG)
15.) Use generic and brand names for medications
16.) List numeric options in ascending or descending order i.e. 1,2,3,4
17.) Avoid using “you” in exam questions. Instead, use “the nurse,” “the physicist” etc.
18.) Use “should” vs. “would” to convey that the question is asking for the best answer (not just one that is probable)

Each department may have established guidelines for writing exam questions. These may be complied in a department “style guide.” Ask your department chair or mentor if one is available.

LINKS:

Review Bloom’s Revised Taxonomy (Anderson & Krathwohl, 2001)
REFERENCES:


Penn, B.K. (2009, August). Test item development and analysis. Presented at Creighton University School of Nursing Faculty Retreat, Omaha, NE.