5 STEPS FOR WRITING
Multiple–Choice Questions

STEP 1
Focus on one concept per item

Concepts should be based on the learning objectives for the course. Construct items that present a clear problem with one solution or next best step.

STEP 2
Construct the stem

Compose a concise, clear question that asks examinees to apply knowledge to a novel scenario. It should match the expectations or outcomes for students in the course.

» **Remember & Understand**: define, identify, locate, name

» **Apply & Analyze**: categorize, classify, interpret, predict, solve

» **Evaluate & Create**: appraise, prioritize, arrange

STEP 3
Avoid common errors

A few examples are:

» Using all of the above and none of the above options

» Including negative phrasing such as "which of the following is not ..." or "all of the following, except"

» Using jargon and abbreviations unfamiliar to examinees

STEP 4
Construct the correct answer

Accompany it with:

» 1 close-to-correct option

» 1 – 3 more plausible distractors that are mutually exclusive

Options should be homogeneous in structure, length, and form. One option should not cue another as being correct or incorrect.

STEP 5
Examine responses using the software's psychometric data

After the exam is administered, it's important to examine how students responded, then use the data to revise and refine future exams.

» **Difficulty Index**: percentage of students who answered the item correctly

» **Discrimination Index**: measurement that indicates how well an item differentiates between high- and low-scoring students (higher index indicates students with a higher score are more likely to answer correctly than a student with a lower score)

» **Distractor Analysis:** tells you how many examinees chose each option

Additional Resource
Dory, V., Allan, K., Birnbaum, L., Lubarsky, S., Pickering, J., & Young, M. (2019). Ensuring the Quality of Multiple-Choice Tests: An Algorithm to Facilitate Decision Making for Difficult Questions. *Academic Medicine 94*(5), 740.

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