

# GUIDANCE ON USING *Multiple-Choice Tests* (MCQ) IN ASSESSMENT



*Shatha F Abdullah*  
*Dept. of Microbiology*  
*College of Medicine*  
*University of Baghdad*

# Objectives

- **Describe** what can be tested with multiple-choice tests.
- **Recognize** the strengths and weaknesses of multiple choice tests.
- **Explain** guidelines for constructing multiple-choice items.

# When to Use

- To test a variety of *levels* of learning
- When you have a *large number* of individuals taking the test
- When you have **time to construct** the test items
- When time is *limited for scoring*

(Clegg & Cashin, 1986)

# Planning a Test

- Use a test **blueprint**.
- Identify **major ideas** and **skills** rather than specific details.
- Choose format :
  - best answer
  - correct answer

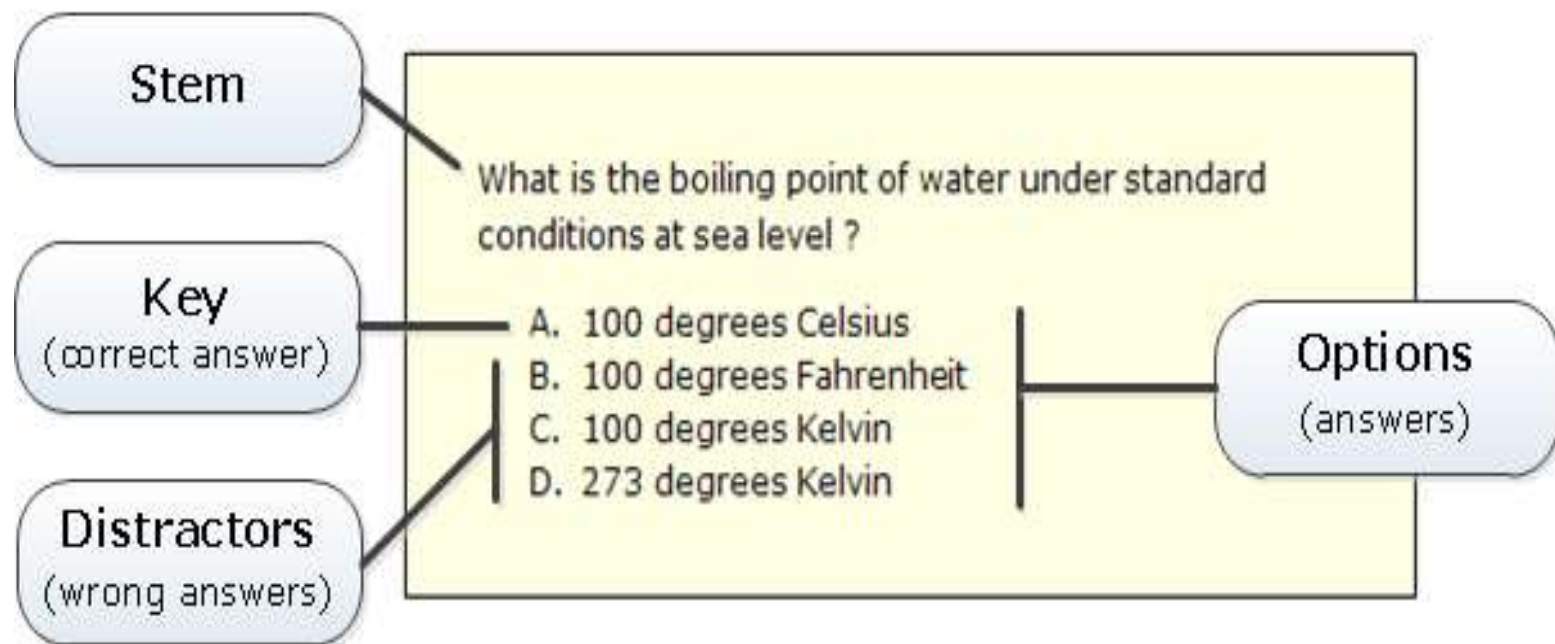


*(Nilson, 2010)*

# Test Matrix

Content Area to be Tested	Level of Cognition Required				Number of questions	% of test devoted to content area
	Remembering or Understanding	Applying	Analyzing or Evaluating	Creating		
<b>Number of questions</b>						
<b>% of test devoted to each cognitive level</b>						

# The Anatomy of an MCQ



# ***Constructing Test Items***



1. Choose an **important concept**
2. Write the **stem**
3. Write the **correct answer** (key)
4. Develop **distractors**

common misconceptions  
errors that could be made

plausible, yet less important information

similar in style, length to the key

every distractor should be reasonable



*(Clegg & Cashin, 1986)*



# Format stems as

- **problems, scenario or tasks**

Clear

central idea

Avoid **window dressing** (excessive verbiage).

**Positively** structured

- Include **most** of informations in the stem so that the options can be **short**

# Ideas for writing these items

- **Provide** sufficient information to answer the item
- present a **problem** that requires:
  - a clinical vignette
  - application of course principles,
  - analysis of a problem,
  - evaluation of alternatives
- Clear & concise

# *The Stem*

- **USE** familiar language
- **PROVIDE** sufficient information
- **DO NOT** create tricky items by omitting essential information
- **DO NOT** add extraneous information
- **AVOID** statements that fail to present a complete thought or question.
- **ELIMINATE** excessive wording and irrelevant information

# Lead -in Question

- Different **clinical tasks** can be tested
- Can be done with the **same stem** (cloning of question)
- **H**istory
- **D**agnosis
- **I**nvestigations
- **M**anagement/Treatment/Drug therapy
- **C**ounseling

# *Writing Item Alternatives*

- Three - five is adequate.
- only one is the right answer.
- Vary the location .
- logical or numerical order.
- independent, not overlapping.

# Writing Item Alternatives




- homogeneous
- **grammatical** structure.
- equal in length
- *None-of-the-above* carefully.
- Avoid *All-of-the-above*.

# Writing Item Alternatives

- AVOID
- negatives such as NOT // I don't know
- clues to the right answer, such as:
  - specific **determinates** including **always**, **never**, **completely**, and **absolutely**.
  - **clang associations**, choices identical to or resembling words in the stem.
  - **prominent** correct choice.
  - **pairs** or **triplets** of options that clue the test-taker to the correct choice.
  - **obviously meaningless, ridiculous** options.

# Summary

- Learning outcome
- Peer review
- Editing and revising
- ↓ Amount of reading
- Cultural and gender
- Vocabulary = level of understanding
-  Clues





**"Judge a man by his questions  
rather than by his answers."  
— Voltaire**