



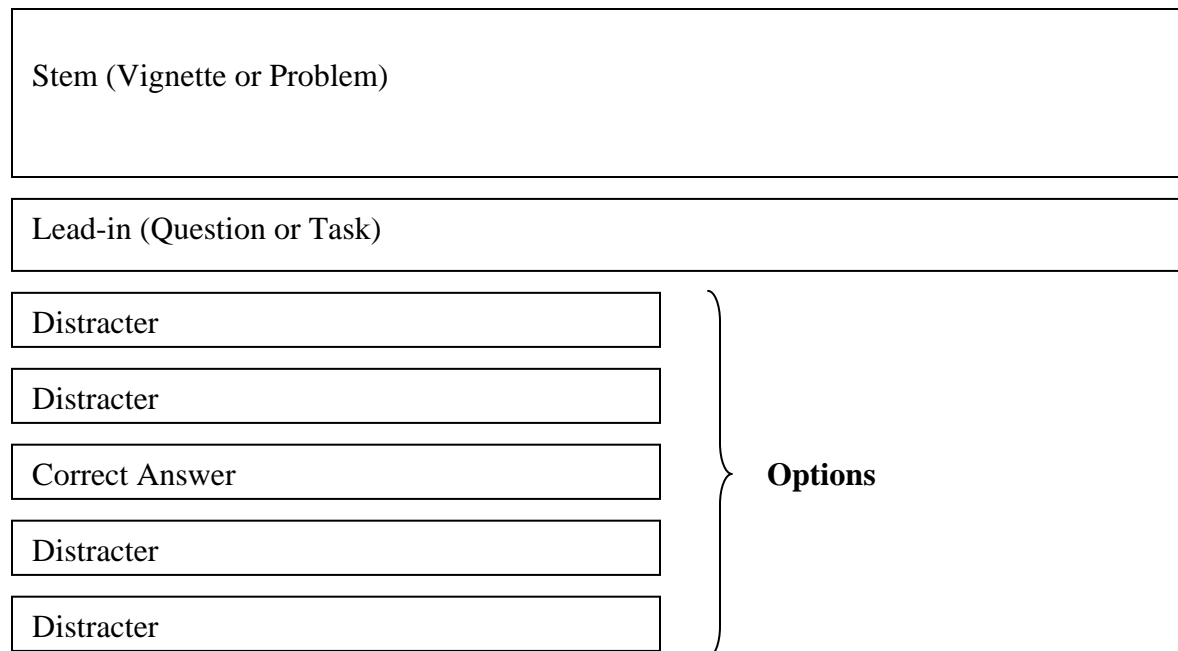
DEVELOPING QUALITY MULTIPLE CHOICE QUESTIONS (MCQs) (One-Best Answer and Extended Matching)

ONE-BEST-ANSWER QUESTIONS

One-best-answer MCQ questions consist of a stem and lead-in followed by a series of five choices, typically one of which is correct and the rest of which are plausible distracters. A one-best-answer question has three major parts—the stem, lead-in, and options—which are constructed as illustrated and described below

Adapted from Susan M. Case and David B. Swanson (2002), *Constructing Written Test Questions for the Basic and Clinical Sciences, 3rd Ed. Revised*, National Board of Medical Examiners

Anatomy of One-Best-Answer Questions



One-Best-Answer Question Checklist

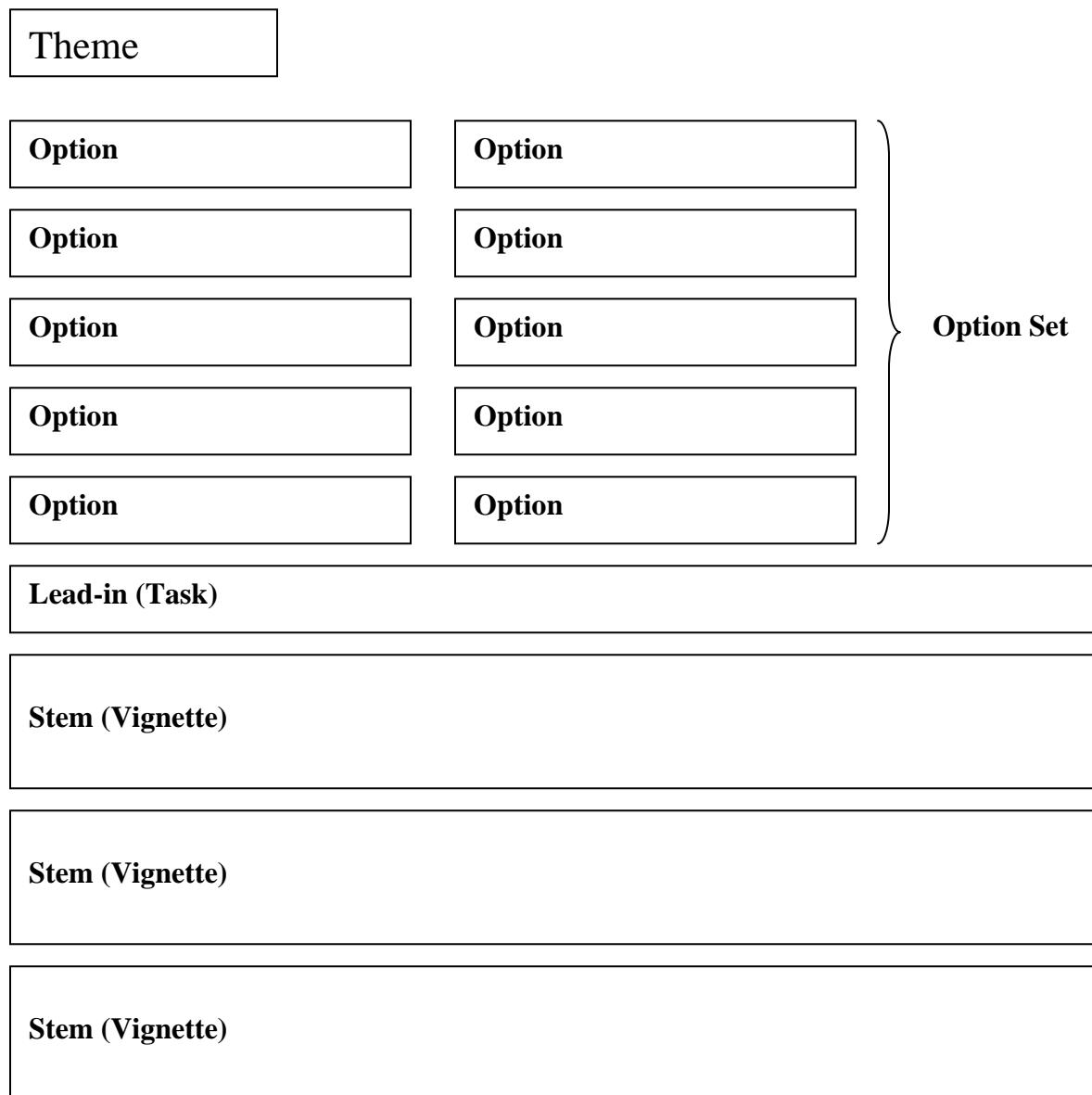
	Yes	No
1. <u>Stem (Vignette)</u>		
Focuses on important concepts	_____	_____
Requires application of knowledge (asks for more than simple recall)	_____	_____
As much of the item as possible has been included in stem (rather than options)	_____	_____
Superfluous information is omitted	_____	_____
Straightforward -- not “tricky” and/or unnecessarily complicated	_____	_____
2. <u>Lead-In</u>		
Lead-in is a direct question	_____	_____
Lead-in is positively phrased, avoids negatives like <i>except</i> or <i>not</i>	_____	_____
The question can be answered with the options covered	_____	_____
3. <u>Answer Options</u>		
Options are grammatically parallel and logically compatible with the stem and lead-in	_____	_____
Language of options is homogeneous	_____	_____
Generic medication names are used	_____	_____
Clear and precise language used, avoiding words like “usually” and “frequently”	_____	_____
Absolute terms such as “always,” “never,” and “all” are <u>not</u> used.	_____	_____
Key words do not appear in both the stem and the correct answer option.	_____	_____
All options are of approximately the same length.	_____	_____
Options are short and straightforward	_____	_____
Neither “none of the above” nor “all of the above” is listed as an option	_____	_____
Numeric options are presented in a consistent format	_____	_____
Options are listed in logical or alphabetical order	_____	_____
Options do not include a subset that is collectively exhaustive (e.g., “increased...,” “decreased...,” or “remained the same”)	_____	_____
Options are mutually exclusive	_____	_____
All options are plausible	_____	_____
There is just one best answer	_____	_____

EXTENDED MATCHING QUESTIONS

Extended-matching is a type of multiple choice question in which a set of questions is organized around one list of options for all items in the set. The elements of an extended-matching set consist of a theme, a list of options, a lead-in statement, and two or more stems, which are constructed as illustrated and described below.

Adapted from Susan M. Case and David B. Swanson (2002), *Constructing Written Test Questions for the Basic and Clinical Sciences, 3rd Ed. Revised*, National Board of Medical Examiners

Anatomy of Extended Matching Question



Extended-Matching Question Checklist

	Yes	No
1. <u>Theme</u>		
Question set has homogenous, coherent theme (e.g. infectious agents, cranial nerves, chief complaint, etc)	_____	_____
2. <u>Options</u>		
Options are single words or very short phrases	_____	_____
Options are grammatically parallel and logically compatible with the stem/lead-in	_____	_____
Language of options is homogeneous	_____	_____
Generic medication names are used	_____	_____
All options are of approximately the same length	_____	_____
The set consists of 6 or more options	_____	_____
Options are listed in logical or alphabetical order	_____	_____
Options are mutually exclusive	_____	_____
All options are plausible	_____	_____
There is just one best answer for each item to be matched	_____	_____
3. <u>Lead-In</u>		
Lead-in clearly states the basis for matching the stems with the options	_____	_____
Directions clearly indicate whether or not an option can be used more than once	_____	_____
4. <u>Stems (Vignettes)</u>		
Stems/vignettes in the set relate to the theme	_____	_____
Items focus on important concepts and assess application of knowledge	_____	_____
Superfluous information is omitted	_____	_____
Stems/vignettes are straightforward and uncomplicated	_____	_____
There are more options than stems	_____	_____
Stems/vignettes within a set are of similar construction	_____	_____
Stems/vignettes can be answered with the options covered	_____	_____