Figure B-2. *Sample multiple choice test item.*

Three major challenges are common in the construction of multiple choice test items. One is the development of a question or an item stem that must be expressed clearly and without ambiguity. A second is that the statement of an answer or correct response cannot be refuted. Finally, the distractors must be written in such a way that they are attractive to those learners who do not possess the knowledge or understanding necessary to recognize the keyed response.

A multiple choice item stem may take one of several basic forms:

- A direct question followed by several possible answers.

- An incomplete sentence followed by several possible phrases that complete the sentence.

- A stated problem based on an accompanying graph, diagram, or other artwork followed by the correct response and the distractors.

The learner may be asked to select the one correct choice or completion, the one choice that is an incorrect answer or completion, or the one choice that is the best answer option presented in the test item.

Beginning test writers find it easier to write items in the question form. In general, the form with the options as answers to a question is preferable to the form that uses an incomplete statement as the stem. It is more easily phrased and is more natural for the learner to read. Less likely to contain ambiguities, it usually results in more similarity between the options and gives fewer clues to the correct response.

When multiple choice questions are used, three or four alternatives are generally provided. It is usually difficult to construct more than four convincing responses; that is, responses which appear to be correct to a person who has not mastered the subject matter. Learners are not supposed to guess the correct option; they should select an alternative only if they know it is correct. An effective means of diverting the learner from the correct response is to use common learner errors as distractors. For example, if writing a question on the conversion of degrees Celsius to degrees Fahrenheit, providing alternatives derived by using incorrect formulas would be logical, since using the wrong formula is a common learner error.

Items intended to measure the rote level of learning should have only one correct alternative; all other alternatives should be clearly incorrect. When items are to measure achievement at a higher level of learning, some or all of the alternatives should be acceptable responses—but one should be clearly better than the others. In either case, the instructions given should direct the learner to select the best alternative.

To use multiple choice questions, consider the following guidelines for construction of effective test items: