### Requirements

- Ensure that each objective is assessed by at least 1 question.
- Questions are simple, clearly stated, and measure *only* the educational objective for which they were designed.
- Questions should be written either in multiple-choice or true/false format. In general, no more than 20% of the questions should be true/false.
- Multiple choice questions should have four options, and options should be specific and distinct. Avoid using "all of the above" and language like "b and c are both correct."
- Assess the important, take-home concepts of the educational activity.

### General Guidelines for Item Construction

- Ensure that each question is similar in terms of grammatical construction, length, and complexity.
- Answer choices should be uniform in length and style and grammatically consistent with the question.
- Avoid using the same or similar words in both the question and the correct answer as this may clue the participant to the correct answer.
- Write options that are grammatically consistent and logically compatible with the question stem; list them in logical or alphabetical order.
- Write distractors (the incorrect answers) that are plausible and the same relative length as the correct answer.
- Avoid using vague terms such as *usually* and *frequently*.
- Pose the question in the affirmative; avoid the use of negative statements such as "not" and "except" because they are often confusing.

### Avoid the following

- ✓ **Grammatical cues**—one or more incorrect answers don't follow grammatically from the question stem.
- ✓ **Long correct answer**—correct answer is longer, more specific, or more complete than other options.
- ✓ **Word repeats**—a word or phrase is included in the question stem and in the correct answer.
- ✓ **The easy way out—** "None of the above" or "all of the above" used as an option.

**Examples (from knowledge-based activities)**

Which of the following is a potential advantage of vernakalant compared with other antiarrhythmic agents currently available?

    a. More atrial specific, resulting in less proarrhythmic effects.*
    b. Better efficacy in maintaining sinus rhythm.
    c. Faster onset of action.
    d. Effective in both atrial fibrillation and flutter.

For which of the following indications is botulinum toxin considered "probably ineffective" by the American Academy of Neurology?

    a. Drooling.
    b. Low back pain.
    c. Hemifacial spasm.
    d. Chronic tension headache.*

**Examples (from application-based activities)**

SP is a 69-year-old man with a history of systolic heart failure (ejection fraction = 25%) who has a recurrence of atrial fibrillation despite being on amiodarone for the past year. The physician would like to discontinue the amiodarone and try another antiarrhythmic in this patient (serum creatinine [SCr] = 0.8 mg/dL). Which of the following antiarrhythmics would be MOST appropriate to use in this patient?

    a. Dofetilide.*
    b. Dronedarone.
    c. Flecainide.
    d. Propafenone.

The committee at ABC Hospital gets administration approval to begin drafting a subcutaneous insulin protocol and order set for use in noncritically ill patients. Which of the following recommendations about the transition from intravenous to subcutaneous insulin therapy in hospitalized patients would be appropriate to include in the protocol?

    a. Treatment with intravenous and subcutaneous insulin should not overlap because of the long half-life of intravenous insulin and risk of hypoglycemia.
    b. Treatment with intravenous and subcutaneous insulin should overlap because of the short half-life of intravenous insulin and risk of hyperglycemic escape.*
    c. Treatment with subcutaneous insulin should not be initiated until the patient is able to consume food.
    d. Long-acting subcutaneous insulin analogs should be used with meals when the ability to consume food is uncertain.