

**Writing Well Formatted Questions for Continuing Education**  
*tips from the SNMMI Education Department*

A question should test a single concept, and ask for the single best answer rather than have the individual identify each possible answer as True or False.

**KEY CONCEPT: A question is formatted correctly if it is possible to answer the question without looking at the multiple possible answers.**

For example, a well formatted question is:

Question 1. What is the color of a cloudless sky at noon?

1. Red
2. Yellow
3. Blue (correct answer)
4. Black

The question tests a single concept, which is the color of a cloudless sky at noon

An improperly formatted question is:

Question 2. Regarding the color of the sky:

- |                               |     |
|-------------------------------|-----|
| 1. It is red at night         | (F) |
| 2. It is yellow when it rains | (F) |
| 3. It is blue at noon         | (T) |
| 4. It is black at dawn        | (F) |

It is impossible to answer this question without looking at the possible answers and determining if each one is true or false. This type of question is psychometrically poor. It tests multiple concepts, i.e., the color of the sky at different times and conditions

**KEY CONCEPT: A well formatted question asks which answer is correct, not which answer is incorrect.**

The following example is a poorly formatted question:

Question 3. All of the following colors can be seen in the sky at noon, except:

1. Blue
2. White
3. Gray
4. Black (correct answer)

An exam is psychometrically poor when some questions ask individuals to select truth, while other questions ask individuals to select falsehood, as the correct answer.

**KEY CONCEPT: A well formatted question has only one correct answer, not multiple correct answers.**

The following example is a poorly formatted question:

Question 4. Which color can be seen in the sky at noon?

1. Blue
2. White
3. Black
4. Both 1 and 2 (correct answer)

This question is psychometrically poor because it tests multiple concepts, including the color of the sky when it is clear, as well as the color of the sky when there are clouds.

**KEY CONCEPT: A well formatted question only contains the information required to answer the question. Extraneous or misleading information should not be included.**

Compare the following poorly formatted question to Question 1.

Question 5. One day after it rains, wind gusts are measured at 30 knots. The temperature is 42 degrees Fahrenheit at 11 a.m. There are no clouds in the sky. What is the color of a cloudless sky at noon?

1. Red
2. Yellow
3. Blue (correct answer)
4. Black

Information regarding the weather during the previous day, as well as wind speed and temperature, is not required to answer the question.

**KEY CONCEPT: A well formatted question has correct and incorrect answers of equal length, and the same general type.**

Compare the following poorly formatted question to Question 1.

Question 6. What is the color of a cloudless sky at noon?

1. Deep red with shades of lighter red
2. Bright lemon yellow
3. Blue (correct answer)
4. Clear

This question is psychometrically poor because there is length discrepancy between the correct and incorrect answers, and option 4 is not a color (different type).

## **SUMMARY**

Writing a good question is difficult. Remember these points to help you write a good question:

1. Keep the question focused (one concept)
2. It should be possible to answer the question without looking at the answer (avoid multiple true-false)
3. Questions should be formatted to identify truth, not exclude falsehood (don't ask which answer is incorrect)
4. There should only be one correct answer (don't use "all of the above", "some of the above" [e.g. A and B], or "none of the above").
5. Exclude extraneous or misleading information in the question (keep it as short as possible)
6. Possible answers should be the same length, and the same type.