

# *Creating “GREAT” Multiple Choice Questions*

It's important to create high quality questions. You can't have a good evaluating tool without them. Every good tool should test the challenger's hierarchy of thought. Your questions need to employ simple to higher levels of thinking skills. The ability to recall is a simple thinking skill and the majority of tests are primarily composed of recall questions. It is appropriate to have up to 70% of your questions be different types of recall questions. Defining is a more complex skill than recall and therefore requires a higher level of thinking. Strong tests are composed of 20% to 25% of defining questions. The ability to evaluate is considered to be a high level skill. Evaluation questions typically comprise 5% to 10% of the test. They take an in-depth understanding to write and answer.

Questions not only need to cover these three different levels of thought, but should also adequately cover the topic being evaluated. Topics are typically composed of facts, concepts, procedures, and principles. Here are examples of recalling, defining, and evaluating questions for each of the four different areas of a topic. We'll start with facts.

*(Take your time, and carefully consider how each question in the groups below is similar, and also how it is different.)*

## *Facts*

### **Recalling a fact**

*Who put the “ram” in the “ramma lamma ding dong?”*

- a) Dion and the Belmonts*
- b) Danny and the Juriors*
- c) Lawrence Welk*

### **Defining a fact**

*Which river runs from north to south and empties into the Gulf of Mexico?*

- a) Columbia*
- b) Mississippi*
- c) Potomac*

### **Evaluating a fact**

*Which is the longest way from San Francisco to San Jose?*

- a) Via Route 101*
- b) Via the Junipero Sierra Freeway*
- c) Via State Route 1*

Facts are specific, typically only a single answer is correct.

## *Concepts*

### **Recalling a concept**

*Which of the following defines “recalcitrant?”*

- a) Lazy*
- b) Hesitant*
- c) Scared*

### **Defining a concept**

*Which represents a “typographical error?”*

- a) a misspelled word*
- b) missing punctuation*
- c) a typing error*

### **Evaluating a concept**

*Which is most effective for cleaning bleached hair?*

- a) Benzine*
- b) Conditioner*
- c) A mild shampoo*

Concepts are broader than facts. They are the basic understanding of an idea.

## *Principles*

### **Recalling a principle**

*What is the principle regarding when to use evaporative cooling systems in the Sonoran Desert?*

- a) The rate of evaporation is highest with low humidity*
- b) Water vapor conducts heat*
- c) Effectiveness of evaporative cooling is governed by fan speed*

### **Defining a principle**

*Which explains the reason for a thunderstorm in the summer?*

- a) Two air masses, hot and cold, collide along a weather front.*
- b) During a humid day, rapid heating causes hot air to rise and the rapid cooling causes a rapid, violent thunderstorm*
- c) Hot, moist air is pushed into a mountain; the rising air cools and becomes a violent rainstorm*

### **Evaluating a principle**

*What is the most effective way to cool a home in a humid climate?*

- a) Evaporative cooler*
- b) Air conditioner*
- c) Cooling tower*

Principles are the rules that describes the way something works, the important underlying law.

### *Procedures*

#### **Recalling procedures**

*Which procedure is recommended for correcting a patient's lop ear deformity?*

- a) Abbotts's*
- b) Johnson's*
- c) Olsen's*

#### **Defining procedures**

*In tennis, what kind of stroke causes the ball to rise and then fall abruptly, tending to bounce very high and away from the court?*

- a) Underspin*
- b) Top spin*
- c) Lob*

#### **Evaluating procedures**

*What is the most effective way to treat athlete's foot?*

- a) Wear sandals*
- b) Using a fungicidal foot powder*
- c) Using a fungicidal salve*

Procedures are a step by step course of action or process. It is a correct method of doing something.

There are twelve different question types above. With a little thought and practice it gets easier to write each one of these different types. When you do so, your evaluations become stronger and the test they are used in will increase in validity. They ensure the essential elements of your topic and the hierarchical cognitive levels of thinking are all covered. These twelve different types of questions make it easier to measure the true depth of understanding and knowledge of the topic you are evaluating.

*Refine those Questions*

Use this checklist on every question you compose.

- \_\_\_\_\_ no errors in grammar, spelling, or punctuation
- \_\_\_\_\_ no trick items
- \_\_\_\_\_ material is significant, not trivial
- \_\_\_\_\_ the correct answer and the distracter lengths are similar
- \_\_\_\_\_ avoid the use of humor
- \_\_\_\_\_ questions are free from ambiguity

***Remember -***

Better Questions equals Better Tests equals Better Evaluations equals Better Instruction

Sincerely,  
The Staff of NCCT

End of Handout