

Anatomy of a Multiple-Choice Item

The multiple choice question consists of a stem, which presents a problem situation, and several alternatives, which provide possible solutions to the problem. The stem may be a question or an incomplete statement. The alternatives include the correct answer and several plausible wrong answers, called distracters. The function of the distracters is to distract those students who are uncertain of the answer

Examples of forms of MCQs

1. Correct answer

- (i) What arithmetic process should be used when deciding how many cookies each child should get when distributing twelve cookies equally among three children?
 - a. addition
 - b. subtraction
 - c. multiplication
 - d. division*

- (ii) What is the major advantage of a teacher-made test over a standardised test?
 - a. It is usually an objective test thus eliminating subjective judgement.
 - b. It is usually better suited to the educational objectives of the class.
 - c. It is usually a nonverbal test, thus decreasing the reliance on language skills.
 - d. It gives the teacher an opportunity to discuss the items on the test with the students as they select their responses.*

2. Incomplete statement

- (i) The most significant use of language in the development of the human race is that it has become a means of
 - a. preserving family unity.
 - b. developing the educational system.
 - c. creating national unity.
 - d. developing thinking in the individual.*

- (ii) An emotion can best be described briefly as
 - a. a feeling of insecurity.
 - b. an attitude of aggression.
 - c. a stirred-up state of the organism.*
 - d. an elated state of the organism.

3. Combined response

(i) A basketball falls freely from rest and hits the ground. It then rebounds to $\frac{1}{4}$ of its original height. Neglecting air resistance, which of the following statements about the basketball is/are correct?

- (1) Its kinetic energy just before collision is four times its kinetic energy just after collision.
- (2) Its potential energy just before collision is four times its potential energy just after collision.
- (3) The speed just before collision is two times the speed just after collision.

- a. (1) only.
- b. (2) only.
- c. (2) and (3) only.
- d. (1) and (3) only.*
- e. (1), (2) and (3).

(ii) Which of the following capacitors are suitable for use in a high frequency circuit?

- (1) air capacitor,
- (2) mica capacitor,
- (3) ceramic capacitor,
- (4) electrolytic capacitor.

- a. (1), (2) and (3).*
- b. (1), (2) and (4).
- c. (1), (3) and (4).
- d. (2), (3) and (4).

4. 'Best answer'

(i) Which one of the substances listed below is the poorest conductor of heat?

- A. Air*
- B. glass
- C. brick
- D. water

(ii) Which of the following has the greatest current when it is operated at 200V?

- A. a lamp with a resistance of 400Ω
- B. a rice-cooker with rating of 400W at 200V
- C. an electric iron with rating of 400W at 220V
- D. a motor with a resistance of 250Ω
- E. a hair-dryer with rating of 600W at 200V