



NEW YORK STATE
TEACHER
CERTIFICATION
EXAMINATIONS™



**PREPARATION
GUIDE**

**Communication
and Quantitative
Skills Test
(CQST) (80)**

The University of the State of New York • NEW YORK STATE EDUCATION DEPARTMENT • Office of Teaching Initiatives, Albany, New York 12234

NY-SG-FLD080-02

**This test is now delivered as a computer-based test.
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**PREPARATION GUIDE
Communication and Quantitative Skills Test
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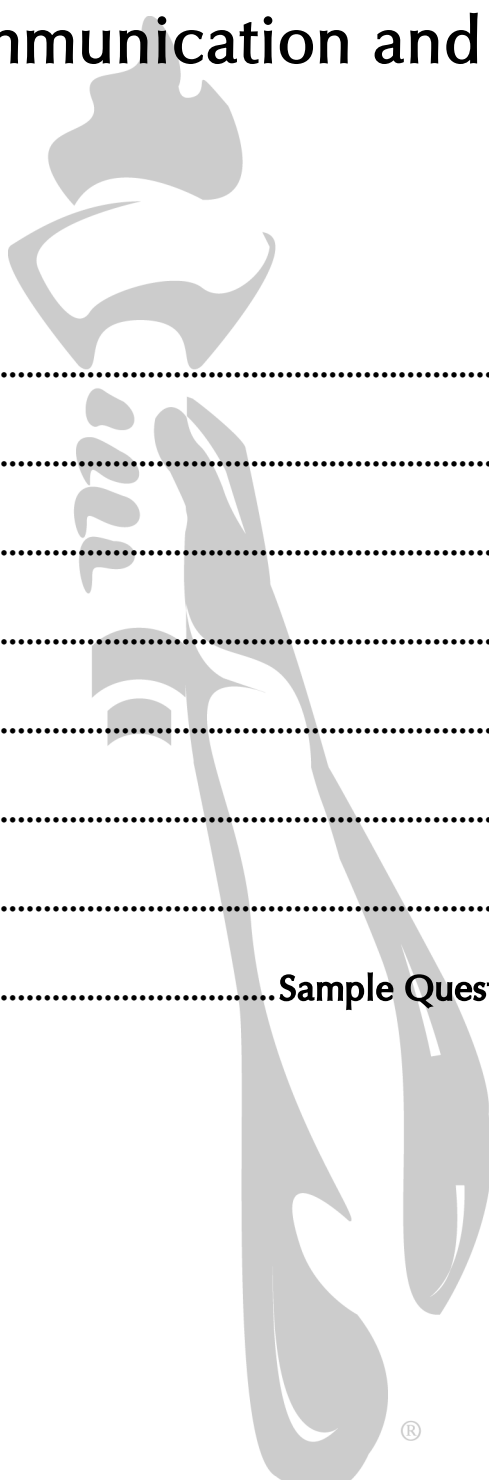
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■ INTRODUCTION

Purpose of This Preparation Guide

This preparation guide is designed to help familiarize candidates with the content and format of a test for the New York State Teacher Certification Examinations (NYSTCE®) program. Education faculty and administrators at teacher preparation institutions may also find the information in this guide useful as they discuss the test with candidates.

This preparation guide illustrates some of the types of questions that appear on a test; however, the set of sample questions provided in this preparation guide does not necessarily define the content or difficulty of an entire actual test. All test components (e.g., directions, question content and formats) may differ from those presented here. The NYSTCE program is subject to change at the sole discretion of the New York State Education Department.

Organization of This Preparation Guide

Contained in the beginning sections of this preparation guide are general information about the NYSTCE program and how the tests were developed, a description of the organization of test content, and strategies for taking the test.

Following these general information sections, specific information about the test described in this guide is presented. The test objectives appear on the pages following the test-specific overview. The objectives define the content of the test.

Next, information about the questions on the CQST is presented, including sample test directions. Sample questions are also presented, with the correct responses indicated and explanations of why the responses are correct.

For Further Information

If you have questions after reading this preparation guide, you may wish to consult the NYSTCE Registration Bulletin. You can view or print the registration bulletin online at www.nystce.nesinc.com.

■ GENERAL INFORMATION ABOUT THE NYSTCE

How Were the NYSTCE Tests Developed?

The New York State Teacher Certification Examinations are criterion referenced and objective based. A criterion-referenced test is designed to measure a candidate's knowledge and skills in relation to an established standard rather than in relation to the performance of other candidates. The explicit purpose of these tests is to help identify for certification those candidates who have demonstrated the appropriate level of knowledge and skills that are important for performing the responsibilities of a teacher in New York State public schools.

Each test is designed to measure areas of knowledge called subareas. Within each subarea, statements of important knowledge and skills, called objectives, define the content of the test. The test objectives were developed for the New York State Teacher Certification Examinations in conjunction with committees of New York State educators.

Test questions matched to the objectives were developed using, in part, textbooks; New York State learning standards and curriculum guides; teacher education curricula; and certification standards. The test questions were developed in consultation with committees of New York State teachers, teacher educators, and other content and assessment specialists.

An individual's performance on a test is evaluated against an established standard. The passing score for each test is established by the New York State Commissioner of Education based on the professional judgments and recommendations of New York State teachers. Examinees who do not pass a test may retake it at any of the subsequently scheduled test administrations.

Organization of Content

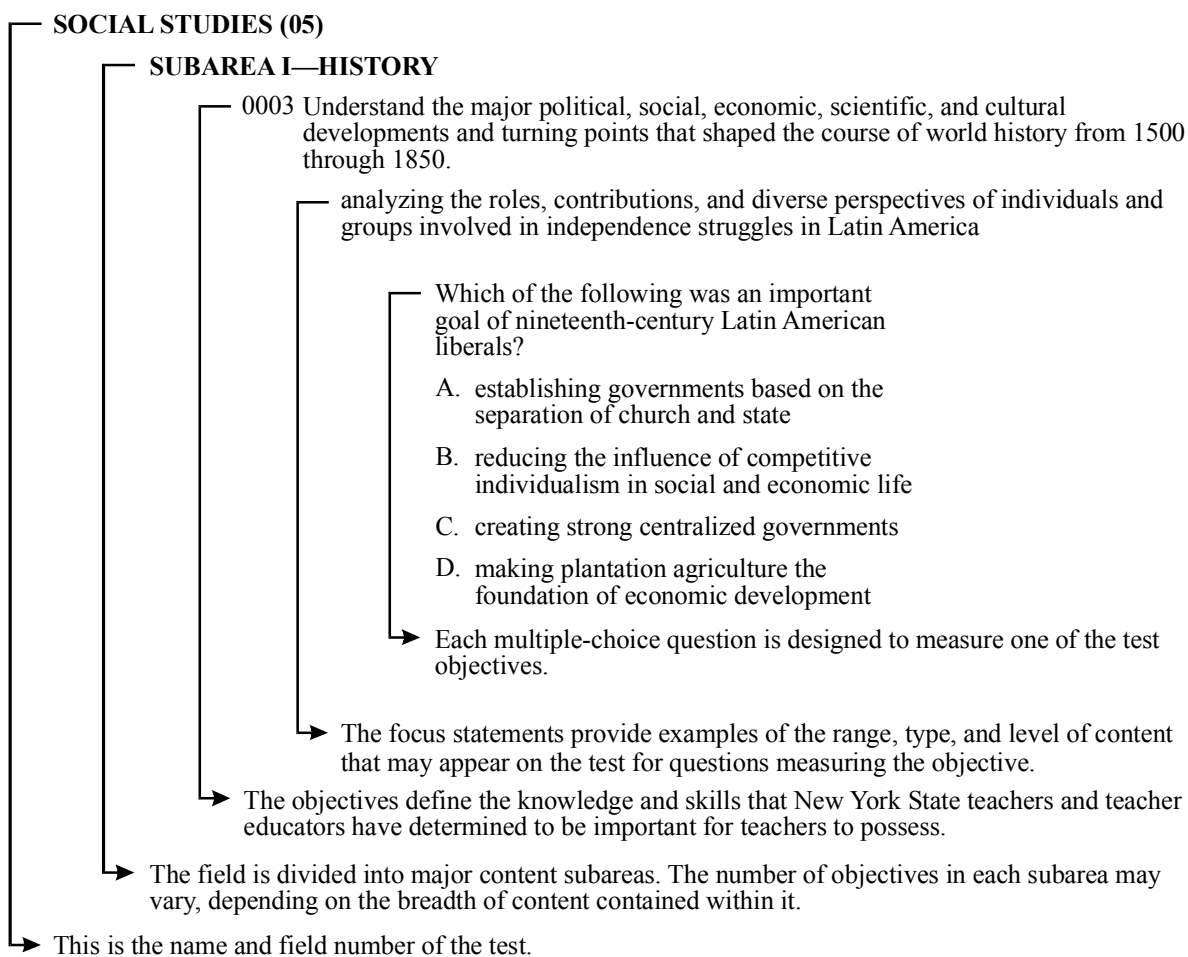
The content covered by each test is organized into **subareas**. These subareas define the major content domains of the test.

Subareas typically consist of several **objectives**. Objectives provide specific information about the knowledge and skills that are assessed by the test.

Each objective is elaborated on by **focus statements**. The focus statements provide examples of the range, type, and level of content that may appear on the tests.

Test questions are designed to measure specific test objectives. The number of objectives within a given subarea generally determines the number of questions that will address the content of that subarea on the test. In other words, the subareas that consist of more objectives will receive more emphasis on the test and contribute more to a candidate's test score than the subareas that consist of fewer objectives.

The following example, taken from the field of Social Studies, illustrates the relationship of test questions to subareas, objectives, and focus statements.



■ TEST-TAKING STRATEGIES

Be On Time.

Arrive at the test center on time so that you are rested and ready to begin the test when instructed to do so.

Follow Directions.

At the beginning of the test session and throughout the test, follow all directions carefully. This includes the oral directions that will be read by the test administrators and any written directions in the test booklet. The test booklet will contain general directions for the test as a whole and specific directions for individual test questions or groups of test questions. If you do not understand something about the directions, do not hesitate to raise your hand and ask your test administrator.

Pace Yourself.

The test schedule is designed to allow sufficient time for completion of the test. Each test session is four hours in length. The tests are designed to allow you to allocate your time within the session as you need. However, you will be required to return your materials at the end of the four-hour session.

Since the allocation of your time during the test session is largely yours to determine, planning your own pace for taking the test is very important. Do not spend a lot of time with a test question that you cannot answer promptly; skip that question and move on. If you skip a question, be sure to skip the corresponding row of answer choices on your answer sheet. Mark the question in your test booklet so that you can return to it later, but be careful to appropriately record on the answer sheet the answers to the remaining questions.

You may find that you need less time than the four hours allotted in a test session, but you should be prepared to stay for the entire time period. Do not make any other commitments for this time period that may cause you to rush through the test.

Read Carefully.

Read the directions and the questions carefully. Read all response options. Remember that multiple-choice test questions call for the "best answer"; do not choose the first answer that seems reasonable. Read and evaluate all choices to find the best answer. Read the questions closely so that you understand what they ask. For example, it would be a waste of time to perform a long computation when the question calls for an approximation.

Read the test questions, but don't read into them. The questions are designed to be straightforward, not tricky.

Mark Answers Carefully.

Your answers for all multiple-choice questions will be scored electronically; therefore, the answer you select must be clearly marked and the only answer marked. If you change your mind about an answer, erase the old answer completely. Do not make any stray marks on the answer sheet; these may be misinterpreted by the scoring machine.

IF YOU SKIP A QUESTION, BE SURE TO SKIP THE CORRESPONDING ROW OF ANSWER CHOICES ON YOUR ANSWER SHEET.

You may use any available space in the test booklet for notes, but **your answers must be clearly marked on your answer sheet. ONLY ANSWERS THAT APPEAR ON YOUR ANSWER SHEET WILL BE SCORED.** Answers marked in your test booklet will not be scored.

Guessing

As you read through the response options, try to find the best answer. If you cannot quickly find the best answer, try to eliminate as many of the other options as possible. Then guess among the remaining answer choices. Your score on the test is based on the number of test questions that you have answered correctly. There is no penalty for incorrect answers; therefore, it is better to guess than not to respond at all.

Passages or Other Presented Materials

Some test questions are based on passages or other presented materials (e.g., graphs, charts). You may wish to employ some of the following strategies while you are completing these test questions.

One strategy is to read the passage or other presented material thoroughly and carefully and then answer each question, referring to the passage or presented material only as needed. Another strategy is to read the questions first, gaining an idea of what is sought in them, and then read the passage or presented material with the questions in mind. Yet another strategy is to review the passage or presented material to gain an overview of its content, and then answer each question by referring back to the passage or presented material for the specific answer. Any of these strategies may be appropriate for you. You should not answer the questions on the basis of your own opinions but rather on the basis of the information in the passage or presented material.

Check Accuracy.

Use any remaining time at the end of the test session to check the accuracy of your work. Go back to the test questions that gave you difficulty and verify your work on them. Check the answer sheet, too. Be sure that you have marked your answers accurately and have completely erased changed answers.

■ ABOUT THE CQST

The purpose of the CQST is to assess knowledge and skills in the following three subareas:

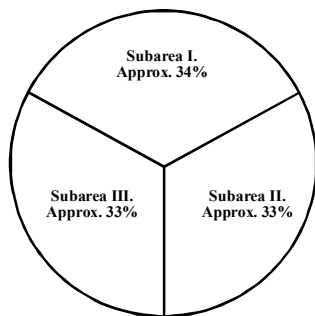
Subarea I. Reading

Subarea II. Writing

Subarea III. Mathematics

The test objectives presented on the following pages define the content that may be assessed by the CQST. Each test objective is followed by focus statements that provide examples of the range, type, and level of content that may appear on the test for questions measuring that objective.

The test contains approximately 100 multiple-choice test questions. The figure below illustrates the approximate percentage of the test corresponding to each subarea.



The section that follows the test objectives presents sample test questions for you to review as part of your preparation for the test. To demonstrate how each objective may be assessed, a sample question is presented for each objective. The correct response and an explanation of why the response is correct follow each question.

The sample questions are designed to illustrate the nature of the test questions; they should not be used as a diagnostic tool to determine your individual strengths and weaknesses.

■ CQST OBJECTIVES

Reading
Writing
Mathematics

SUBAREA I—READING

0001 Understand the meaning of general vocabulary words.

For example:

- determining the meaning of commonly encountered words presented in context
- identifying appropriate synonyms or antonyms for words
- recognizing the correct use of commonly misused pairs of words (e.g., their/there, to/too)

0002 Understand the stated main idea of a reading passage.

For example:

- identifying the stated main idea of a passage
- identifying the topic sentence of a passage
- recognizing introductory and summary statements of a passage
- selecting an accurate restatement of the main idea of a passage

0003 Understand the sequence of ideas in a reading passage.

For example:

- identifying the order of events or steps described in a passage
- organizing a set of instructions into their proper sequence
- identifying cause-and-effect relationships described in a passage

0004 Interpret textual and graphic information.

For example:

- interpreting information from tables, line graphs, bar graphs, and pie charts
- recognizing appropriate representations of written information in graphic or tabular form
- recognizing differences between fact and opinion

SUBAREA II—WRITING

0005 Understand the standard use of verbs.

For example:

- identifying standard subject-verb agreement (e.g., number, person)
- identifying verb tense (e.g., present, past)
- recognizing consistency of verb tense (e.g., verb endings)

0006 Understand the standard use of pronouns and modifiers.

For example:

- identifying agreement (e.g., number, gender, person) between a pronoun and its antecedent
- using possessive pronouns (e.g., its vs. it's), relative pronouns (e.g., that, which), and demonstrative pronouns (e.g., this, that)
- using comparative and superlative modifiers (e.g., good/better/best)

0007 Understand standard sentence structure and punctuation.

For example:

- distinguishing between sentence fragments and complete sentences
- distinguishing between run-on sentences and correctly divided sentences
- identifying correct and incorrect punctuation

0008 Understand the standard use of capitalization and spelling.

For example:

- identifying standard capitalization at the beginning of sentences
- identifying standard capitalization of proper words and titles
- recognizing standard spelling of commonly encountered words presented in context

SUBAREA III—MATHEMATICS

0009 Understand number concepts.

For example:

- identifying the place value of digits (e.g., hundreds, tens, ones, tenths)
- identifying correctly rounded numbers (e.g., to the nearest ten)
- identifying equivalent weights and measures in different units (e.g., feet and inches, quarts and pints, kilograms and grams)
- estimating the solution to a measurement problem (e.g., height, distance, perimeter)

0010 Understand the addition and subtraction of whole numbers.

For example:

- solving problems involving the addition of whole numbers
- solving problems involving the subtraction of whole numbers
- applying principles of addition and subtraction of whole numbers to solve problems encountered in everyday life

0011 Understand multiplication and division of whole numbers.

For example:

- solving problems involving the multiplication of whole numbers
- solving problems involving the division of whole numbers
- applying principles of multiplication and division of whole numbers to solve problems encountered in everyday life

0012 Understand operations involving fractions, decimals, and percents.

For example:

- solving problems involving fractions (e.g., recipes)
- solving problems involving decimals (e.g., money)
- solving problems involving percents (e.g., grades, discounts)
- solving problems involving conversions between fractions, decimals, and percents

■ SAMPLE QUESTIONS FOR THE CQST

This preparation guide provides sample questions for the test. The questions illustrate the objectives of the test—one sample question for each objective.

Three pieces of information are presented for each test question:

1. the number of the test objective that the sample question illustrates,
2. a sample test question,
3. an indication of the correct response and an explanation of why it is the best available response.

Keep in mind when reviewing the questions and response options that there is one best answer to each question. Remember, too, that each explanation offers one of perhaps many perspectives on why a given response is correct or incorrect in the context of the question; there may be other explanations as well.

On the following page are sample test directions similar to those that candidates see when they take the test.

SAMPLE TEST DIRECTIONS FOR THE CQST

DIRECTIONS

Each question in this booklet is a multiple-choice question with four answer choices. Read each question CAREFULLY and choose the ONE best answer. Record your answer on the answer sheet in the space that corresponds to the question number. Completely fill in the space having the same letter as the answer you have chosen. *Use only a No. 2 lead pencil.*

- Sample Question:
1. What is the capital of New York?
 - A. Buffalo
 - B. New York City
 - C. Albany
 - D. Rochester

The correct answer to this question is C. You would indicate that on the answer sheet as follows:

1. A B C D

You should answer all questions. Even if you are unsure of an answer, it is better to guess than not to answer a question at all. You may use the margins of the test booklet for scratch paper, but you will be scored only on the responses on your answer sheet.

FOR TEST SECURITY REASONS, YOU MAY NOT TAKE NOTES OR REMOVE ANY OF THE TEST MATERIALS FROM THE ROOM.

The words "End of Test" indicate that you have completed the test. You may go back and review your answers, but be sure you have answered all questions before raising your hand for dismissal. Your test materials must be returned to a test administrator when you finish the test.

If you have any questions, please ask them now before you begin the test.



DO NOT GO ON UNTIL YOU ARE TOLD TO DO SO.

■ SAMPLE QUESTIONS, CORRECT RESPONSES, AND EXPLANATIONS

Read the passage below; then answer the three questions that follow.

When you look at a large factory, you probably do not think about the trees growing in the park. But green plants are a special kind of factory all their own. Using nothing more than water and sunlight, green plants have the unique ability to produce their own food. At the same time, they also make it possible for other living things to exist.

All of this work is done by their leaves. Special cells in the leaves absorb energy from sunlight. This light energy reacts with water that the plant has absorbed from the ground and splits the water into two chemicals. One chemical, oxygen, is released into the air.

The other chemical, hydrogen, helps produce sugars that enable the plant to grow new stems, leaves, blossoms, and seeds.

By making their own food, plants accomplish several things. They keep themselves alive. They grow the seeds needed to reproduce. They produce the pollen that enables other plants of their kind to reproduce. Meanwhile, the oxygen released into the air makes it possible for other living things to survive.

Human beings have created factories that make wonderful products for us to use and enjoy. But the "living factories" that nature has created produce something even more special—life.



Objective 0001

Understand the meaning of general vocabulary words.

1. **Read the sentence below, taken from the first paragraph of the passage; then complete the exercise that follows.**

Using nothing more than water and sunlight, green plants have the unique ability to produce their own food.

Select the word that has the *opposite* meaning of the word unique as it is used in the sentence above.

- A. interesting
 - B. distinctive
 - C. common
 - D. unusual
-

Correct Response: C. To have a unique ability is to be the only one with that ability. Thus, of the choices available, the word "common" is most opposite in meaning to the word unique as it appears in the passage.



Objective 0002

Understand the stated main idea of a reading passage.

2. Which sentence best expresses the main idea of the passage?
- A. Most of the living things on Earth depend upon green plants.
 - B. Green plants are a very special kind of living factory.
 - C. Leaves do the most important work for green plants.
 - D. Human factories and nature's factories have a lot in common.
-

Correct Response: B. The passage compares green plants to factories in two different ways. Like factories, green plants use raw materials to create products. But no other factory produces a product as important as the one that green plants do—the oxygen that makes life on Earth possible. Thus, the main idea of the passage is best expressed by Response B. None of the other alternatives fully captures both parts of the passage.



Objective 0003

Understand the sequence of ideas in a reading passage.

3. According to the passage, what happens first when sunlight falls on plant leaves?
- A. The plant produces new stems, leaves, and blossoms.
 - B. Special cells in the leaves absorb energy in the sun's rays.
 - C. Sugars in the leaves are released that feed the plant.
 - D. The leaves absorb water from the ground.
-

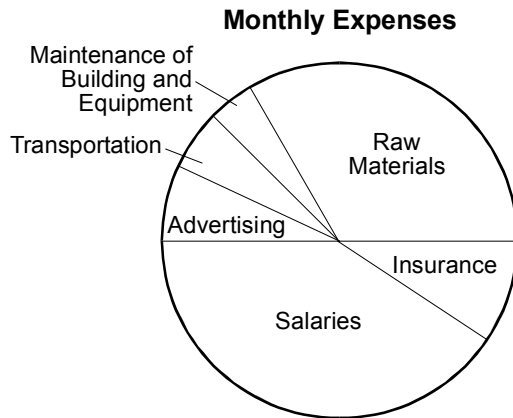
Correct Response: B. In the second paragraph of the passage, the author describes the sequence of events that takes place when the leaf of a green plant is exposed to sunlight. First, light energy is absorbed by special cells in the leaf. Second, that energy reacts with water in the leaf to create hydrogen and oxygen. Third, the oxygen is released into the air. Last, the hydrogen helps produce sugars that enable the plant to grow and reproduce. Thus, Response B best describes the first thing that happens when sunlight falls on plant leaves.



Objective 0004

Interpret textual and graphic information.

4. Use the pie chart below to answer the question that follows.



The pie chart above shows the monthly expenses for a company. Which of the following is the best approximation of the percentage of expenses spent on raw materials?

- A. 15%
- B. 25%
- C. 33%
- D. 66%

Correct Response: C. A pie chart is a pictorial representation that indicates parts (the pie-shaped pieces) of a whole (the circle). This pie chart shows the parts that make up a company's monthly expenses. The pie-shaped part labeled "Raw Materials" makes up approximately one third, or 33%, of the whole circle that represents the company's monthly expenses.



Objective 0005

Understand the standard use of verbs.

5. In which sentence is the *correct* verb form used?
- A. Mathematics continue to be a difficult subject for many high school students.
 - B. All of the runners is expected to do well in the race.
 - C. Which of the seniors have been selected as class president?
 - D. The film consists primarily of interviews with world-famous scientists.
-

Correct Response: D. A verb must agree with its subject. If the subject of a sentence is singular, the singular form of the verb must be used. If the subject of a sentence is plural, the plural form of the verb must be used. Among the response choices, only Response D shows agreement between the subject and the verb. The singular verb, "consists," agrees with the singular noun, "film," the subject of the sentence.



Objective 0006

Understand the standard use of pronouns and modifiers.

6. Which sentence is constructed *correctly*?
- A. All of the students in the class did his part to make the play a big success.
 - B. Ms. Jones is one of those teachers who are always trying to make her classes more interesting.
 - C. Last year, Ms. Jones encouraged the students in her drama class to produce one-act plays.
 - D. Ms. Jones hopes the auditorium will have their own stage lights next year.
-

Correct Response: C. Pronouns such as *her*, *his*, *its*, and *their* must agree with the word or words to which they refer. If the word to which a pronoun refers is singular, a singular pronoun must be used; if the word to which a pronoun refers is plural, a plural pronoun must be used. In Response C, a singular pronoun, *her*, agrees with the single person, *Ms. Jones*, to which it refers. In none of the other responses does the pronoun agree with the word or words to which it refers.



Objective 0007

Understand standard sentence structure and punctuation.

7. Which sentence is punctuated *incorrectly*?
- A. According to the curriculum guidelines, students need to learn about the working world.
 - B. Working with local businesses is valuable; it provides an interesting and rewarding experience.
 - C. Farmers and merchants, as well as health workers, are involved in the program.
 - D. Students get actual working experience; while also attending classes.
-

Correct Response: D. A semicolon is used to separate closely related independent clauses that are not joined by a conjunction such as *and*, *but*, *or*, or *yet*. An independent clause contains a subject and a predicate and can stand alone as a sentence. In Response D, only one of the clauses separated by the semicolon is an independent clause. Thus, the semicolon is *not* used correctly.



Objective 0008

Understand the standard use of capitalization and spelling.

8. Which underlined word in the sentence below is spelled *correctly*?

The realisation that they were facing an outbreak of typhoid was an ominnous development with potentially ghastly consaquences.

- A. realisation
 - B. ominnous
 - C. ghastly
 - D. consaquences
-

Correct Response: C. Only the word in Response C is spelled correctly. The correct spellings of the words in Responses A, B, and D are *realization*, *ominous*, and *consequences*.



Objective 0009

Understand number concepts.

9. 0.07 is equal to:

A. $\frac{7}{100}$

B. $\frac{1}{7}$

C. $\frac{7}{10}$

D. $\frac{10}{7}$

Correct Response: A. Numbers to the right of a decimal point indicate a fraction of a whole. The first number to the right of a decimal point indicates tenths, the second number to the right of a decimal point indicates hundredths, the third number to the right of a decimal point indicates thousandths, and so on. Thus, the number 0.07 is the same as seven hundredths or the fraction $\frac{7}{100}$.



Objective 0010

Understand the addition and subtraction of whole numbers.

10. Select the number that is missing in the problem below.

$$\begin{array}{r} 1,806 \\ - \\ \hline 358 \end{array}$$

- A. 1,448
 - B. 1,756
 - C. 2,164
 - D. 2,774
-

Correct Response: A. This problem asks you to find the number that, when subtracted from 1,806, equals 358. That number is the same as 1,806 minus 358, which is 1,448.



Objective 0011

Understand multiplication and division of whole numbers.

11. Which number is a multiple of 7?
- A. 27
 - B. 48
 - C. 52
 - D. 63
-

Correct Response: D. The multiples of a number result from multiplying that number by the whole numbers 0, 1, 2, 3, and so on. The first eleven multiples of 7 are 0, 7, 14, 21, 28, 35, 42, 49, 56, 63, and 70. Thus, only Response D is a multiple of 7.



Objective 0012

Understand operations involving fractions, decimals, and percents.

12. What is 4% of 400?

- A. 16
 - B. 64
 - C. 100
 - D. 160
-

Correct Response: A. Four percent (4%) of something is the same as four hundredths of something. To determine four hundredths of 400, you would multiply $\frac{4}{100}$ by 400 (or multiply 0.04 by 400). The result is 16.