

# Study Guide and Sample Test For The National Firefighter Selection Test



**Provided By**



# NATIONAL FIREFIGHTER SELECTION TEST (NFST) STUDY GUIDE

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# **Introduction**

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This study guide is designed to help you obtain your maximum potential score on the National Firefighter Selection Test (NFST). It is divided into four parts which provide useful information for preparing to take this test.

**Preparing for the Test**

**Taking the Test**

**Sample Test Items**

**Sample Test Answer Key**

## **Preparing for the Test**

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You will increase your chance of obtaining your best possible score if you spend some time preparing for the test. This includes finding out as much as possible about the test ahead of time, paying proper attention to yourself physically before the test, not becoming overly anxious about the test and using a good test-taking strategy.

For optimal test results, read this study guide thoroughly and answer the sample test items beginning on page 8. Make sure you read all the directions carefully and each test question completely before answering.

### **Test Format**

The NFST is made up of three separate sections: Listening Comprehension, Reading Comprehension and Mathematics, all of which use a multiple-choice or true/false format. Each section is administered and timed separately. Specific instructions are provided at the beginning of each section. Although most of the questions in this test battery relate to firefighting, you need no prior knowledge of the fire service to answer the questions.

### **Examination Hints**

Your score is based on the total number of correct answers, so try to answer every question on the test. This means there is no penalty for guessing, so respond to every item, even if you are not certain of the answer. When you are not certain, make your best guess and move on to the next question.

## Time Limits

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It is important to know the amount of time allotted for each section of the test so you can pace yourself and avoid spending too much time on questions giving you trouble. Remember there is no penalty for guessing. If you find you are spending too much time on a question, guess and move on. If you finish before time is called, you can go back and check your answers. The number of items and the time limits for each section of the test are listed below.


<b>Section</b>	<b>Number of Items</b>	<b>Time (Minutes)</b>
Reading Comprehension <i>Standard Version</i>	25	25
Mathematics	25	30
Listening Comprehension	20	20

## Marking Your Answers

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Since the test can be hand scored or computer scored, it is important to follow the instructions given at the test administration to ensure your answers are read correctly. Below is a summary of the scoring instructions for both the hand scored and the computer scored versions of the test.

### Hand Scored Version

- Use a pen.
- Make heavy black marks that completely fill the circle.
- If you want to change your answer mark an X over the incorrect response like this . Then mark the new answer.
- Make no stray marks on the test booklet.
- Scratch paper is provided in the test booklet for the math section.
- The response alternatives are listed horizontally to the right of the question.

### Computer Scored Version

- Use a #2 or softer lead pencil. Do not use ink.
- Make heavy black marks that completely fill the circle.
- Completely erase any marks you wish to change.
- Make no stray marks on the test booklet.
- Scratch paper is provided in the test booklet for the math section.
- The response alternatives are listed vertically below the question.

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Be sure that you blacken only one response for each question. If you blacken more than one, the question will be incorrect, even if one of the answers is correct.

All three sections of the test are in multiple-choice or true/false format; a question followed by either two or four alternatives. The sample questions in this guide are in the vertical format.

For each question there be either two circles labeled A and B or four circles labeled A, B, C and D. You will blacken the circle that corresponds to the answer you think is correct. For example, assume that for test question number 1, you feel that B is the correct answer. You would blacken the circle labeled B in the test booklet, as shown below.

1.       A  
           B  
           C  
           D  
           E

## **Taking the Test**

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This part of the NFST study guide provides some common sense advice for the day you take the test. Although some of these things may seem obvious, paying attention to such details will increase your probability of obtaining your maximum potential score.

### **Before the Test Begins**

Arrive early. You may be assigned a seat or you may be able to pick your own. Either way, settle in and put your things away. Try to relax, but concentrate on the test you are about to take. Put outside distractions out of your mind. Give the test you are about to take your complete attention.

### **Listen Carefully**

The test administrator will provide you with complete and detailed instructions for taking each section. Be sure to pay close attention to what this person has to say. Do not read ahead because you may miss something important. If you do not hear or do not understand the directions, ask the test administrator to repeat them. It is extremely important that you completely understand the directions before the test begins.

### **Test Timing**

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Just before the signal to begin each section of the test, make a mental note of what time it will be when the time limit is up. For example, if you begin a section at 3:00 and the time limit is 20 minutes, make a mental note that time will be up at 3:20. This will allow you to pace yourself while working through the test. Remember, your score on the test will be the total number correct. Therefore, you will want to work both quickly and accurately.

You should not spend too much time on any one question. Allow enough time to work through each one, but if you find you are spending too much time on an item, guess and move on. If you finish before time is up, you can always go back and check the questions where you guessed.

## **Preparing Yourself Physically for the Test**

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- Avoid junk food and concentrate on a well balanced diet for at least several days beforehand.
- Avoid tranquilizers and stimulants such as coffee, especially on the day of the test.
- Get a good night's sleep.
- Do not drink a lot of liquid or eat a big meal before the test.
- Avoid alcohol several days prior to and especially on the day of the test.

# Sample Test Items

## Section I – Listening Comprehension

This test measures how well you comprehend what you have heard. The test format is similar to listening and taking notes at a lecture on material you will be tested on later. A passage will be read to you, and you will take notes as you deem appropriate on notepaper that will be provided in the test booklet. Later in the testing session you will be asked questions about the material in the passage, and you will be able to refer to your notes when answering. The questions will be in a multiple-choice and true/false format.

Have someone read the following sample listening passage to you and take notes as you listen. Reading the passage should take no more than 5 minutes. Set the notes aside and refer to them later on in this guide when you answer the sample test questions.

### Sample Listening Passage

***Have someone read this passage to you as you take notes.***

Last year, more than 17,000 hazardous materials incidents occurred in transit on our nation's roads, accounting for 85% of all haz-mat incidents. The first responder who can recognize certain characteristics of the cargo container and its contents will have an advantage in the initial decision-making to bring the incident under control.

Atmospheric pressure cargo tanks are easily identified by their elliptical shape and flat ends. The most common of all road trailers, they typically haul petroleum products and have a 9,000 gallon capacity which is loaded in the rear of the tanker.

Low-pressure cargo tanks transport flammable, combustible liquids; mild corrosives; and poisons and have a 7,000 gallon capacity. These cargo tanks have a circular shape, stiffening rings and top-center loading domes.

High-pressure cargo tanks transport liquefied petroleum gas and can be recognized by their rounded circular ends and white color. Loading and unloading done through an inlet marked "vapor spray" that is located on the driver's side of the tank. These cargo tanks can haul up to 11,500 gallons.

Cryogenic liquid cargo tanks haul up to 8,000 gallons of extremely cold substances such as liquid oxygen, liquid nitrogen and liquid hydrogen. These tanks are circular in shape and are distinguished by a box-like closet in the rear of the tank which houses the controls and a relief valve. Built-up pressure from warming during transit will cause a normal discharge from the valve.

***(Now set your notes aside and continue with the rest of this sample test.)***

## **Section II – Reading Comprehension**

This section measures how well you understand what you read. It consists of a number of short paragraphs, each followed by some questions. All the information you need to answer the questions is contained in the paragraphs. In some instances, you may need to draw a conclusion from the information.

### **Sample Passage #1**

In recent years, nearly 80% of civilian fire deaths occurred in residential settings. A quick search and rescue by fire personnel is essential in saving lives. During the primary search, which is rapid and thorough, firefighters should look for victims as close to the source of the fire as possible and work outward. Experience has shown that victims are typically found in the area behind or near the front door. Other high-target areas to be searched are the bedrooms and bathrooms. Children most often hide under their beds and in closets, though firefighters should search the latter area only as far as their arms will reach. Fire victims also seek refuge in the bathroom, believing the tub and water will protect them.

1. According to the passage, 80% of all fires occur in the home.
  - A. True
  - B. False
  
2. According to the passage, the primary search
  - A. is slow and thorough
  - B. begins in the bedroom or bathroom
  - C. begins as close to the source of the fire as possible
  - D. begins at the front door
  
3. According to the passage, in a home fire, children
  - A. can be found where the fire started
  - B. will often hide under their bed
  - C. usually run out the front door
  - D. can always be found in the bathtub

## Section II - Reading Comprehension Continued

4. According to the passage, during the primary search, a firefighter would not search an entire walk-in closet.
- A. True
  - B. False
5. According to the passage, which of the following would be considered a low priority in a search for fire victims?
- A. A bathroom
  - B. By the front door
  - C. The bedroom
  - D. The kitchen
6. According to the passage, during a home fire, fire victims are likely to be found
- A. hiding under their bed
  - B. in the bathroom
  - C. by the front door
  - D. in the fire room

## Section II - Reading Comprehension Continued

### Sample Passage #2

A new product on the market, called INSTA-CRIB, is offered as an aid to fire departments for vehicle stabilization. The 15-pound aluminum device is placed under the wheel of a vehicle and an arm extends upward that automatically adjusts and locks to the wheel. This compact device measures 20 inches long and is taller than most step chocks, extending to 13 inches. INSTA-CRIB is rated for a 2,500-pound maximum load and is easily decontaminated. A larger version, which measures 26 inches in length and extends 18 inches is also available for securing the wheels of larger vehicles, such as trailer trucks. This version is rated for a maximum 5,000-pound load.

7. According to the passage, INSTA-CRIB is used to
  - A. turn the wheels of a vehicle
  - B. secure the wheels of a vehicle
  - C. lift the wheels of a vehicle off the ground
  - D. deflate the wheels of a vehicle
  
8. According to the passage, the INSTA-CRIB for automobiles
  - A. is rated for a maximum 5,000 pound load
  - B. weighs 20 pounds
  - C. measures 15 inches in length
  - D. extends 13 inches
  
9. According to the passage, once the stabilization device is placed under a wheel, it automatically adjust and locks.
  - A. True
  - B. False
  
10. According to the passage, the length of the INSTA-CRIB to be used for a large moving van is
  - A. 13 inches
  - B. 15 inches
  - C. 20 inches
  - D. 26 inches

## Section II - Reading Comprehension Continued

11. According to the passage, INSTA-CRIB
- A. is a type of step-chock
  - B. is available in two sizes
  - C. is made of aluminum
  - D. All the above
12. According to the passage, how high does the INSTA-CRIB device extend for larger vehicles?
- A. 13 inches
  - B. 15 inches
  - C. 18 inches
  - D. That information is not provided in the passage.

## Section II - Reading Comprehension Continued

### Sample Passage #3

Before there were above ground fire hydrants, as early as the 1600s, fire fighters would access water by digging down to the water main. They would quickly make a hole in it and transport the water by way of bucket brigades, or later, hand pumped fire engines. After putting out the fire, they would plug the hole in the water main with a stopper, which became known as a fire plug. The first U.S. above ground hydrant was developed in Philadelphia in 1803, but underground fire hydrants have been used abroad since at least the 1700s. After the Great Fire of London of 1666, the city put installed water mains with pre-drilled holes that were equipped with risers, which allowed access to the fire plugs from street level. Today in the UK, underground hydrants are indicated by a yellow sign bearing the letter "H." For underground hydrants in Finland, such signs are painted blue. In Australia, underground hydrants have signs with several codes, including "H" for potable water and "RH" for recycled water. In the U.S., flags or red, narrow posts are attached to hydrants so they can be found during heavy snowfall. In non-snowy areas, blue reflectors are embedded in the street to help firefighters quickly find them at night.

13. According to the information in the passage, the first above ground fire hydrant in the U.S. was developed in
- A. the early 1600s
  - B. 1666
  - C. the 1700s
  - D. 1803
14. According to the information in the passage, before above ground fire hydrants were available, early fire fighters
- A. dug holes until they hit the water table
  - B. punctured the water main
  - C. pumped water out of fire engines
  - D. carried buckets from nearby homes
15. According to the information in the passage, immediately following the Great Fire of London, the city
- A. installed the first above ground fire hydrant
  - B. designed water mains so water could be obtained without digging
  - C. put up signs to indicate where hydrants were located
  - D. began using hand pumped fire engines

## Section II - Reading Comprehension Continued

16. According to the information in the passage, a hydrant in the country of Finland is identified by
- A. painting the hydrant blue
  - B. the letters "RH" on a sign
  - C. the letter "H" on a blue sign
  - D. reflectors in the roadway
17. According to the information in the passage, which of the following countries has underground hydrants today?
- A. Australia
  - B. England
  - C. Finland
  - D. All the above
18. According to the information in the passage, in the early days of firefighting, the term "fire plug" referred to
- A. the water mains that supplied a town
  - B. the first wooden fire hydrants
  - C. the stoppers placed in water mains
  - D. water main risers leading up to street level

### Section III – Mathematics

This section measures your ability to perform the basic math functions required of entry-level firefighters. It consists of fire-related story problems and formulas that call for you to use addition, subtraction, multiplication and division. There are also some problems that call for simple algebra, squares and square roots.

19. A firefighter searches a school that is 75 feet long and 50 feet wide. What is the perimeter of the building?
- A. 125 feet
  - B. 150 feet
  - C. 200 feet
  - D. 250 feet
20.  $2 \times 7 + 11 =$
- A. 25
  - B. 29
  - C. 36
  - D. Not given
21. If  $A = 2$ ,  $B = 3$  and  $C = 5$ , what is  $AB + BC$ ?
- A. 13
  - B. 21
  - C. 48
  - D. 90
22. A foundation wall can be divided into segments based on the number of anchor bolts embedded in the concrete. If a 16 foot long wall is divided into 24 inch segments, how many segments are there?
- A. 7
  - B. 8
  - C. 9
  - D. 10

### Section III – Mathematics Continued

23.  $3 + 4^2 + 9 =$

- A. 16
- B. 18
- C. 20
- D. 28

24.  $.3 \times 10 + 2.5 =$

- A. 2.8
- B. 5.5
- C. 12.8
- D. Not given

## Section I – Listening Comprehension Sample Test Questions

*Refer to the notes that you took for the sample listening passage to answer the following test questions.*

25. According to the passage, what type of cargo tank is usually white in color?
- A. Atmospheric pressure cargo tank
  - B. Low-pressure cargo tank
  - C. High-pressure cargo tank
  - D. Cryogenic liquid cargo tank
26. According to the passage, what is the hauling capacity for low-pressure cargo tanks?
- A. 7,000 gallons
  - B. 8,000 gallons
  - C. 9,000 gallons
  - D. 11,500 gallons
27. According to the passage, what type of cargo tank is used to haul liquid nitrogen?
- A. Atmospheric pressure cargo tank
  - B. Low-pressure cargo tank
  - C. High-pressure cargo tank
  - D. Cryogenic liquid cargo tank
28. According to the passage, incidents involving hazardous materials most commonly occur during transit.
- A. True
  - B. False
29. According to the passage, the atmospheric pressure cargo tank can be recognized by its
- A. white color
  - B. elliptical shape and flat ends
  - C. circular shape and top-center dome
  - D. closet-like box at the end of the tank

## Section I –Sample Test Questions Continued

30. According to the passage, liquefied petroleum gas is transported in a(n)
- A. atmospheric pressure cargo tank
  - B. low-pressure cargo tank
  - C. high-pressure cargo tank
  - D. cryogenic liquid cargo tank
31. According to the passage, atmospheric pressure cargo tanks are loaded through
- A. the rear of the tank
  - B. the top of the tank
  - C. an inlet located on the driver's side
  - D. The passage did not specify how cargo is loaded.
32. According to the passage, which cargo tanker has the highest loading capacity?
- A. Atmospheric pressure cargo tank
  - B. Low-pressure cargo tank
  - C. High-pressure cargo tank
  - D. Cryogenic liquid cargo tank
33. According to the passage, first responders to the scene of an overturned cargo tanker with a box-like closet at the rear of the tank will encounter what type of hazardous material?
- A. Flammable substances
  - B. Extremely cold substances
  - C. Liquefied petroleum gas
  - D. Petroleum products
34. According to the passage, what is the most common type of tanker seen on the road?
- A. Atmospheric pressure cargo tank
  - B. Low-pressure cargo tank
  - C. High-pressure cargo tank
  - D. Cryogenic liquid cargo tank

# Sample Test Answer Key

## Section II - Reading Comprehension

1. **B** (False), because the passage states that nearly 80% of fire deaths occurred in residential settings, not fires.
2. **C**, since according to the passage, during the primary search, firefighters should look for victims as close to the source of the fire as possible and work outward.
3. **B**, since according to the passage, children most often hide under their beds and in closets.
4. **A** (True), since the passage states that when firefighters search closets, they should search only as far as their arms will reach.
5. **D**, since the passage does not discuss the kitchen in a home being a high-target area.
6. **C**, since according to the passage, experience has shown that victims are typically found in the area behind or near the front door.
7. **B**, because according to the passage, the INSTA-CRIB is offered as an aid to fire departments for vehicle stabilization.
8. **D**, because according to the passage, this compact device measures 20 inches long and is taller than most step chocks, extending to 13 inches.
9. **A** (True), since according to the passage, an arm from the device extends upward that automatically adjusts and locks to the wheel.
10. **D**, since according to the passage, a larger version which measures 26 inches in length is available for securing the wheels of larger vehicles.
11. **D**, because according to the passage, the INSTA-CRIB is a type of step chock, is available in two sizes, and is made of aluminum making all of the answers correct.
12. **C**, since the passage states that a larger version of the INSTA-CRIB which measures 26 inches in length and extends 18 inches is available for securing the wheels of larger vehicles.
13. **D**, because the passage indicates that the first U.S. above ground hydrant was developed in Philadelphia in 1803.

## Section II - Reading Comprehension Continued

14. **B**, because the passage states that before there were above ground fire hydrants, firefighters would access water by digging down to the water main, quickly make a hole in it and transport the water away using bucket brigades.
15. **B**, since the passage states that after the Great Fire in London, the City installed water mains equipped with risers which allowed access to fire plugs from street level
16. **C**, because the passage states that underground hydrants in Finland bear signs with the letter "H" such as in the UK, but the signs in Finland are painted blue, not yellow as in the UK.
17. **D**, since the passage indicates that each of the countries listed has underground hydrants.
18. **C**, since the passage indicates that after putting out a fire, firefighters would plug the hole in the water main with a stopper, which became known as a fire plug.

## Section III - Mathematics

19. **D**, because the perimeter of the warehouse is calculated by adding the width of the four sides:  $75 + 50 + 75 + 50$ .
20. **A**, because 2 multiplied by 7 is 14 and adding 11 equals 25.
21. **B**, because 2 (A) multiplied by 3 (B) is 6; 3 (B) multiplied by 5 (C) is 15. 6 plus 15 is 21.
22. **B**, because 24 inches equals 2 feet and 16 divided by 2 is 8  
**OR** because a 16 foot wall is 192 inches ( $16 \times 12$ ), and 192 inches divided by 24 is 8.
23. **D**, because 3 plus 4 squared (16) plus 9 equals 28.
24. **B**, because .3 multiplied by 10 equals 3, and 3 plus 2.5 equals 5.5.

## Section I - Listening Comprehension

25. **C**, since the passage indicates that high-pressure cargo tanks can be recognized by their white color.
26. **A**, because according to the passage, low-pressure cargo tanks have a 7,000 gallon capacity.
27. **D**, since the passage states that cryogenic liquid cargo tanks haul extremely cold substances, such as liquid oxygen, liquid nitrogen and liquid hydrogen.
28. **A (True)**, because according to the passage, more than 17,000 hazardous materials incidents occurred in transit on our nation's roads, accounting for 85% of all haz-mat incidents.
29. **B**, because according to the passage, atmospheric pressure cargo tanks are easily identified by their elliptical shape and flat ends.
30. **C**, since the passage indicates that high-pressure cargo tanks transport liquefied petroleum gas.
31. **A**, since the passage states that atmospheric pressure cargo tanks have a 9,000 gallon capacity which is loaded in the rear of the tanker.
32. **C**, because according to the passage, high-pressure cargo tanks can haul up to 11,500 gallons, compared with atmospheric-pressure cargo tanks which have a 9,000 gallon capacity, low-pressure cargo tanks which have a 7,000 gallon capacity, and cryogenic liquid cargo tanks which have an 8,000 gallon capacity.
33. **B**, since the passage indicates that cryogenic liquid cargo tanks, which haul extremely cold substances, are circular in shape and are distinguished by a box-like closet in the rear of the tank which houses the controls and a relief valve.
34. **A**, since the passage states that atmospheric pressure cargo tanks are the most common of all road trailers.