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**National Security Agency (NSA) / Central Security Service (CSS)**

**LOGICAL REASONING TEST  
PREPARATION GUIDE**



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## OVERVIEW

This guide is intended to help you prepare for the NSA \ CSS Logical Reasoning Test – a multiple-choice test created to assess your ability to draw accurate conclusions based on available information. The thought processes involved in answering Logical Reasoning Test questions are the same as those used by individuals in critical jobs at the Agency to make decisions, solve problems, and learn new information.

The Logical Reasoning Test includes several unique passages that present you with a set of related facts. For each passage, there are six to eight conclusions drawn from the facts provided. You are asked to read the passage and determine whether each conclusion is **true**, **false**, or whether there is **insufficient information to decide** whether the conclusion is true or false. Choosing “insufficient information” means that you recognize the need to gather more information in order to know for certain if the conclusion is true or false.

## PRACTICE LOGICAL REASONING TEST

To help you prepare for the Logical Reasoning Test, the NSA \ CSS developed a practice test containing three passages. Start by carefully reading the first passage on page 2. Next, read the first conclusion and decide whether it is **true**, **false**, or there is **insufficient information to decide**, and record your answer in the space provided. Once you are done, turn to page 5 and compare your answers to the answers and explanations provided for you. *Although it may be tempting to check an answer before completing the entire practice test, you will receive the most benefit from the practice test if you answer all the questions first.*

## TEST TAKING TIPS

Before starting the practice Logical Reasoning Test, review these test taking tips:

1. Read the passage very carefully before answering questions.
2. **DO NOT** consider outside information when determining a response. All of the information you need to make your decisions is contained within the passage.
3. Some test taking guides advise that the answers to questions containing certain clue words are more likely to be either **true** or **false**. Specifically, the correct answer to a question containing an “all or nothing” word (e.g., all, every, no, none) is usually **false**, and the correct answer to a question containing a word that allow for exceptions (e.g., some, few, most, less likely, more likely) is usually **true**. This advice does not necessarily apply to the Logical Reasoning Test. That is, the correct answer to a conclusion containing a false clue is as likely to be **true** or **insufficient information to decide** as it is **false**. Similarly, the correct answer to a conclusion containing a true clue is as likely to be **false** or **insufficient information to decide** as it is **true**.
4. You should have one or two pieces of scratch paper available so you can take notes and/or draw diagrams that help organize your thoughts and determine answers.
5. Finally, take time to study the explanation for each question very carefully. This will help you fine-tune your reasoning on the actual test.

## NSA \ CSS LOGICAL REASONING TEST: PRACTICE TEST

**PASSAGE 1**

The following passage describes a set of facts. The passage is followed by eight conclusions. Read the passage and then decide whether each conclusion is:

- T) true**, which means that you can infer the conclusion from the facts given
- F) false**, which means that the conclusion cannot be true given the facts
- I) insufficient information**, which means that there is insufficient information for you to determine whether the conclusion is true or false

Omega Corporation manufactures two types of cell phones – conventional cell phones and smart phones – at three plants located in the southern United States.

All Omega conventional cell phones are manufactured at either the Simmons Plant or the Yeager Plant.

No Omega conventional cell phones have a suggested retail price greater than \$50.

Most Omega cell phones that have a suggested retail price greater than \$50 are produced at the Duffy Plant.

- \_\_\_ 1. All Omega cell phones manufactured at either the Simmons Plant or the Yeager Plant are conventional cell phones.
- \_\_\_ 2. All Omega cell phones manufactured at the Duffy Plant are smart phones.
- \_\_\_ 3. No Omega cell phones manufactured at the Simmons Plant are smart phones.
- \_\_\_ 4. All Omega cell phones manufactured at the Yeager and Simmons Plants have a suggested retail price greater than \$50.
- \_\_\_ 5. Some Omega cell phones manufactured at the Duffy Plant are not smart phones.
- \_\_\_ 6. All Omega cell phones that have a suggested retail price less than \$50 are not smart phones.
- \_\_\_ 7. Some Omega cell phones with a suggested retail price greater than \$50 are manufactured at either the Simmons Plant or the Yeager Plant.
- \_\_\_ 8. All Omega cell phones that are manufactured at the Yeager Plant and have a suggested retail price less than \$50 are conventional cell phones.

## NSA \ CSS LOGICAL REASONING TEST: PRACTICE TEST

**PASSAGE 2**

The following passage describes a set of facts. The passage is followed by six conclusions. Read the passage and then decide whether each conclusion is:

- T) true**, which means that you can infer the conclusion from the facts given
- F) false**, which means that the conclusion cannot be true given the facts
- I) insufficient information**, which means that there is insufficient information for you to determine whether the conclusion is true or false

Arnold Television Repair is the largest employer of television repair technicians (TRT) in Center City, with locations on Main Street, Franklin Avenue, and Northfield Road.

Arnold Television Repair only repairs LCD televisions at the Main Street and Franklin Avenue locations.

Some of the TRTs that repair rear projection televisions work at the Northfield location.

All TRTs that work at the Franklin Avenue location are certified to service televisions made by Samsung.

Of the TRTs certified to service televisions made by Sony, 40% work at the Main Street location and 60% work at the Northfield Road location.

- \_\_\_ 9. No TRT working at the Northfield Road location is certified to service Sony televisions.
- \_\_\_ 10. A TRT who repairs rear projection televisions may not work at the Northfield Road location.
- \_\_\_ 11. A TRT working at the Main Street location is definitely certified to service Sony televisions.
- \_\_\_ 12. If a TRT repairs LCD televisions and is not certified to service Sony televisions, then the TRT does not work at the Main Street location.
- \_\_\_ 13. If a TRT is not certified to service Samsung televisions, then the TRT does not work at the Franklin Avenue location.
- \_\_\_ 14. If a TRT works at the Franklin Avenue location, then the TRT is definitely not certified to service televisions made by either Sony or Samsung.

## NSA \ CSS LOGICAL REASONING TEST: PRACTICE TEST

## PASSAGE 3

The following passage describes a set of facts. The passage is followed by six conclusions. Read the passage and then decide whether each conclusion is:

- T) true**, which means that you can infer the conclusion from the facts given
- F) false**, which means that the conclusion cannot be true given the facts
- I) insufficient information**, which means that there is insufficient information for you to determine whether the conclusion is true or false

According to the results obtained from a recent survey, employees are not the only ones who see value in telework. Survey data show that a majority of supervisors believe in the positive impact of telework on their organization's ability to retain high-performing employees. Specifically, 60% reported a positive impact, 38% reported a neither positive nor negative impact, and 2% reported a negative impact.

In general, research has shown that the adoption of telework can help organizations retain productive employees by virtue of supporting their work/life balance. That is, telework improves the overall work/life balance of its employees, which in turn makes it easier for organizations to hold on to employees with knowledge, skills, and abilities that are hard to replace and that have financial value in terms of fostering positive outcomes and results. This could be especially important in situations that require organizations to operate within tight budget constraints and that result in organizations having limited resources for hiring new highly capable employees. In other words, telework—through work/life balance—could encourage individuals who are retirement-eligible to delay their retirement, or ease into their retirement, thereby giving their organizations time to hire or train successor employees who can ensure a transfer of knowledge and skills.

- \_\_\_ 15. Survey data show that the strength of supervisory support for telework is approximately equal to that of employees.
- \_\_\_ 16. If an organization adopts telework, then it can foster outcomes that will translate into financial value.
- \_\_\_ 17. Whenever retirement-eligible employees are not given the option to telework, their organizations will not have enough time to hire and train new employees.
- \_\_\_ 18. Among those supervisors who completed the survey, none believes that telework negatively affects an organization's ability to retain high-performing employees.
- \_\_\_ 19. It is not possible to conclude with certainty whether or not the adoption of telework by the organizations that participated in the survey prompted the majority of retirement-eligible employees to delay their retirement.
- \_\_\_ 20. A supervisor selected at random from those who completed the survey would be more likely to have a neutral attitude towards telework than to have a definitively positive or definitively negative attitude towards telework.

**PASSAGE 1****1. Correct answer is F (False)**

The passage states that Omega Corporation manufactures two types of cell phones (conventional and smart phones) at three plants, with all conventional phones manufactured at the Yeager and Simmons plants. It also states that no conventional phone has a retail price greater than \$50, which indicates that only smart phones have a retail value greater than \$50. The passage further states that most (not all) Omega cell phones with a suggested retail price over \$50 are produced at the Duffy Plant. Therefore, some cell phones manufactured at either the Yeager plant or the Simmons plant have a suggested retail price greater than \$50 and, hence, are smart phones.

**2. Correct answer is T (True)**

The passage states that Omega Corporation manufactures two types of cell phones (conventional and smart phones) at three plants. It also states that all conventional phones are manufactured at the Yeager and Simmons plants. Therefore, the Duffy plant manufactures only smart phones.

**3. Correct answer is I (Insufficient Information to Decide)**

As covered in the explanation for Question 1, the information provided in the passage leads to the conclusion that some of the phones manufactured at the Yeager plant or the Simmons plant are smart phones. The passage does not provide information about whether the smart phones not manufactured at the Duffy plant are manufactured at the Yeager plant, the Simmons plant, or both plants. Therefore, there is insufficient information to determine that no Omega cell phones manufactured at the Simmons Plant are smart phones.

**4. Correct answer is F (False)**

The passage states that all Omega conventional phones are manufactured at either the Yeager plant or the Simmons plant, and that all conventional phones have a suggested retail price less than \$50. Contrary to these facts, Question 4 states that all Omega cell phones manufactured at the Yeager and Simmons Plants have a suggested retail price greater than \$50.

**5. Correct answer is F (False)**

The passage states that Omega Corporation manufactures two types of cell phones (conventional and smart phones) at three plants, with all conventional phones manufactured at the Yeager and Simmons plants. Therefore, the Duffy plant does not manufacture phones other than smart phones.

**6. Correct answer is I (Insufficient Information to Decide)**

The passage states that all Omega conventional phones have a retail price less than \$50. Because Omega Corporation only manufactures conventional and smart phones, the only Omega phones with a retail price greater than \$50 are smart phones. The passage does not provide the information needed to determine whether some Omega smart phones have a retail price less than \$50. Therefore, there is insufficient information to determine that all Omega cell phones with a retail price less than \$50 are not smart phones.

**7. Correct answer is T (True)**

The passage states that most (not all) Omega cell phones with a suggested retail price greater than \$50 are manufactured at the Duffy plant. Therefore, some cell phones with a suggested retail price greater than \$50 are manufactured at either the Yeager plant, the Simmons plant, or both plants.

**8. Correct answer I (Insufficient Information to Decide)**

The passage states that all Omega conventional phones are manufactured at the Yeager plant and the Simmons plant. As covered in the explanation for Question 3, it is possible that some of the cell phones manufactured at the Yeager plant are smart phones, which may have a suggested retail price greater than \$50 or less than \$50. Therefore, there is insufficient information to determine if all of the Omega cell phones manufactured at the Yeager Plant that have a suggested retail price less than \$50 are conventional phones.

**PASSAGE 2****9. Correct answer is F (False)**

The passage states that, of the TRTs certified to service Sony televisions, 40% work at the Main Street location and 60% work at the Northfield Road location. Contrary to the passage, Question 9 states that no TRT working at the Northfield Road location is certified to service Sony televisions.

**10. Correct answer is T (True)**

The passage states that some TRTs who repair rear projection televisions work at the Northfield location. Therefore, a TRT who repairs rear projection televisions may or may not work at the Northfield location.

**11. Correct answer is I (Insufficient Information to Decide)**

The passage states that, of the TRTs certified to service Sony televisions, 40% work at the Main Street location. The passage does not include information about the proportion of TRTs working at the Main Street location who are Sony-certified. Therefore, there is insufficient information to determine whether or not a TRT working at the Main Street location is definitely certified to service Sony televisions.

**12. Correct answer is I (Insufficient Information to Decide)**

The passage states that LCD televisions are only repaired at the Franklin and Main Street locations. It also states that 40% of the TRTs certified to repair Sony televisions work at the Main Street location. Therefore, there is insufficient information to determine whether or not a TRT who repairs LCD televisions and is not Sony-certified works at the Main Street location.

**13. Correct answer is T (True)**

The passage states that all TRTs that work at the Franklin Avenue location are certified to service Samsung televisions. Question 13 reframes this statement in negative terms. That is, a TRT who is not certified to repair Samsung televisions does not necessarily work at the Franklin Avenue location.

**14. Correct answer is F (False)**

The passage states that all TRTs that work at the Franklin Avenue location are certified to service Samsung televisions. Contrary to the passage, Question 14 states that a TRT who works at the Franklin Avenue location is definitely not certified to service Samsung televisions.

**PASSAGE 3****15. Correct answer is I (Insufficient Information to Decide)**

The passage states that a majority of supervisors believe in the positive impact of telework on their organization's ability to retain high-performing employees; however, the passage does not include information about the proportion of employees who support telework. Therefore, there is insufficient information to determine whether or not the strength of supervisory support for telework is approximately equal to that of employees.

**16. Correct answer is T (True)**

The passage states that research has shown that the adoption of telework helps organizations to retain employees by supporting their work/life balance. This support can help organizations hold on to employees with knowledge, skills, and abilities that are hard to replace and that have financial value in terms of fostering positive outcomes and results. Therefore, if an organization adopts telework, then it can foster outcomes that translate into financial value.

**17. Correct answer is I (Insufficient Information to Decide)**

The passage states that, through work/life balance, telework could encourage individuals who are retirement-eligible to delay their retirement and, as a result, allow organizations time to hire or train new employees. While this may be true, the inverse stated in Question 17 is not necessarily true. That is, there is insufficient information to know for certain that an organization that does not offer retirement-eligible employees the option to telework will not have enough time to train new employees. For example, it may be that the organization has developed advance planning to ensure that there is sufficient time to hire and train new employees before retirements take place.

**18. Correct answer is F (False)**

The passage states that 60% of supervisors reported that telework had a positive impact on the retention of high-performing employees, 38% reported a neither positive nor negative impact, and 2% reported a negative impact. Therefore, in contradiction to Question 18, some of the supervisors surveyed reported that telework had a negative impact on the retention of high performing employees.

**19. Correct answer is T (True)**

The passage states that telework acts as an incentive for the retention of retirement-eligible employees; however, the passage does not provide the information needed to determine how many employees would actually postpone their retirement from the organizations included in the survey. Therefore, consistent with Question 19, there is insufficient information to determine whether or not the adoption of telework led to retirement delays in the organizations that participated in the survey.



**20. Correct answer is F (False)**

The passage states that 60% of supervisors reported a positive attitude towards telework, while 2% reported a negative attitude. When these two sets are considered together, they exceed the percentage reported for the neutral set, which was 38%. Therefore, in contradiction to Question 20, it is more likely that a supervisor selected at random would hold either a positive or negative attitude towards telework than a neutral attitude.