

You have been selected to take our Aptitude Test. Our Aptitude Test is designed to measure an applicant's abilities to make logical decisions, reading comprehension, recognize and use of some small tools and performing basic math functions. No prior knowledge of our field positions is required to pass the test. Below are a few examples of the types of questions that will be on the NiSource Aptitude test. Please review the questions prior to your testing appointment.

## Reading Comprehension

This section contains reading passages and questions about the passages. The questions are about information that is stated or implied in the passage and about some of the specific words in the passages. After you read the passage you will be asked a series of questions related to the passage. Please select the most appropriate answer for the passage.

# Identify Practices Basic to Excavation Safety

An excavation or trench should be considered potentially hazardous until determined otherwise. To assure a safe work environment for personnel, this procedure is provided to maximize employee safety with respect to entry into, continued work in, and exit from an excavation or trench.

When entering and working in excavations and trenches the following action shall be taken to provide adequate protection against serious physical harm.

- A fire extinguisher shall be positioned close to and up-wind of the excavation or trench and be immediately available for use if required. The extinguisher shall be positioned in such a way that it may be utilized in an emergency situation.
- If the excavation contains a live gas main or service, an approved oxygen monitor shall be worn by all employees in the excavation.
- Prior to entering an excavation or trench, combustible gas indicator (CGI) readings shall be taken if any odor of gas is present or if there are other reasons to believe that gas or other combustibles are present.

# Definitions

- **Oxygen Deficient Atmosphere.** For the purpose of this procedure an oxygen deficient atmosphere has less than 19.5% oxygen.
  - Note: Normal air at sea level contains approximately 21% oxygen and 79% nitrogen.
- **Combustible Gas or Vapor Mixture.** A combustible gas or vapor mixture is the area between the lower and upper explosive limits. Natural gas has an approximate L.E.L. of 5.0% and U.E.L of 15.0%.
- Acceptable Outer Clothing. Acceptable outer clothing for the purpose of this Procedure excludes clothing made of synthetic materials, except those synthetic materials specifically made of self-extinguishing fibers (SEF), such as aramid (NOMEX).

Acceptable outer clothing for the purpose of this Procedure refers to items of clothing made of 100% cotton.

## Turn the page over and answer the following questions.

## Please select the most appropriate answer for the passage.

- 1. When working in trenches and excavations, suitable outer clothing would consist of clothing made of \_\_\_\_\_.
  - a. Synthetic materials
  - b. Polyester materials
  - c. Nylon materials
  - d. 100% cotton materials
- 2. If a flammable concentration of combustible gas or other combustible agent is present in an excavation, any employee entering the excavation must \_\_\_\_\_.
  - a. Put stone in the excavation to stand on
  - b. Take a CGI reading
  - c. Put on cotton shorts and short sleeve shirt
  - d. Put on a hard hat
- 3. A fire extinguisher shall be positioned close to and \_\_\_\_\_\_ of the excavation or trench and be immediately available for use if required.
  - a. Downwind
  - b. Upwind
  - c. In the excavation
  - d. Near the vehicle

## Answers on next page

#### Answers to Questions above:

- 1. D
- 2. B
- 3. B

#### **Sound Judgment Questions**

While working on a service line replacement, a homeowner from across the street comes over and tells you to move your truck from in front of his house or he will beat you up. What should you do?

- a. Tell him to shut up and keep working
- b. Ask him why the truck is bothering him
- c. Call the police and supervisor
- d. Go move the truck

Which word does not belong in this group?

- a. combustion
- b. explosion
- c. ignition
- d. exhaustion

#### **Basic Math Skills**

You have been asked to go to a new apartment complex and determine the total BTUs needed for the service line. The complex has four (4) apartment units using 80,000 BTUs each. What is the total BTU required for the service line?

- a. 300,000
- b. 312,000
- c. 320,000
- d. 400,000

Natural gas contains 1,000 BTUs of energy in each cubic foot. How many BTUs will be produced with 77.2 cubic feet of natural gas?

a. 74,200 BTUs b. 79,200 BTUs c. 77,200 BTUs d. 76,200 BTUs

# **Tool Recognition**

Please identify the Tool in the picture.



**a. Pipe Threader** b. Circular saw c. Wrench

d. Grinder