

**DEMONSTRATION TEST FOR  
ENTRY-LEVEL FIREFIGHTERS**

**DEMONSTRATION PURPOSES ONLY**

**PREPARED BY  
THE CITY OF WICHITA FALLS  
PERSONNEL DEPARTMENT  
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This demonstration test booklet was designed solely to provide an example of the written examination used to qualify entry level firefighters. It serves no other purpose other than to be an example of the type of test questions found on the qualification test.

INSTRUCTIONS

Read each question or problem carefully. Then select the one best answer from the four alternates, and mark your answer by filling in the space between the dotted lines that corresponds with the answer in the test booklet.

EXAMPLE A: Fire prevention inspections are the single most important non firefighting activity performed by the fire service. A well-planned fire prevention and inspection program, executed by conscientious well-trained individuals can prevent many fires.

Fire prevention and inspection

- a. can keep fires from happening.
- b. must be conducted by firefighters.
- c. is the least critical fire service activity.
- d. is not very productive.

"A" is the correct choice in this example, therefore you would find the number of the test question on the answer sheet and blacken the space under letter "a".

a.	b.	c.	d.

EXAMPLE B:  $12 + 17 =$

- a. 25
- b. 29
- c. 38
- d. 39

"B" is the correct choice in this example, therefore you would fill in the space under letter "b".

a.	b.	c.	d.

EXAMPLE C: A fire department of 18 men operates on 3 eight-hour shifts. How many men are on duty each shift?

- a. 6
- b. 8
- c. 7
- d. 5

"A" is the correct answer in this problem, therefore you would blacken the space between the dotted lines under letter "a".

a.	b.	c.	d.

Be sure that the row of answer spaces has the same number as the number of the question you are working on. If you mark an answer and then wish to change, simply erase completely the answer you wish to change, then mark the new answer.

Answer every question.

Please do not mark in the test booklet. Do your figuring on the scratch paper provided.

If you have any questions during the test, please raise your hand and a test monitor will assist you. Do not disturb the other persons by asking them questions.

When you finish, bring your answer sheet and test booklet to the desk. You may leave quietly then.

Are there any questions before we begin?

Bathroom breaks will be provided for emergency purposes. If you need to take a bathroom break, please raise your hand and a test monitor will assist you. Test timing will not stop during this break, so return as quickly as possible.

Then relax, but do your best.

You may turn the page and begin. (BEGIN TIMING)

1. From a rescue standpoint, it may not be a high priority to deal at length with a victim's family, but the family certainly deserves considerate attention to lessen their anxieties. If possible, let the family see the victim. Even if the victim is dying, consider allowing the family to remain with the victim. Clinical experience shows that making the family leave only adds to their grief. Family members may react with anger and even express verbal aggression toward the rescuer, who must assume an impersonal attitude.

From a rescue standpoint

- a. The family of the victim can be ignored.
  - b. The family of the victim will assist the rescuer.
  - c. The family of the victim also deserves attention.
  - d. The family of the victim should be escorted out of the rescue area.
- 
2. It is generally impossible for the rescue worker to turn off his involvement or forget about it when the emergency is over. Depending on the rescuer's ability to cope with this involvement and the duration and magnitude of the situation, the rescue worker may need help adjusting emotionally. Other emotional problems may follow the emergency. The most important thing to remember is that it is natural, and that asking for help is not a sign of weakness.

Emotional involvement of a rescuer is

- a. Something which can be avoided with training.
- b. Natural.
- c. Should be avoided until after the emergency.
- d. A sign of weakness.

3. Because of their mechanical advantage in converting a given amount of pull to a working power greater than the pull, blocks and tackles are useful for lifting or pulling heavy loads. A block is a wooden or metal frame containing one or more pulleys called sheaves. Tackle is the assembly of ropes and blocks used to multiply the force. Simple tackle is one or more blocks reeved with a single rope. Compound tackle is two or more blocks reeved with more than one rope. Rescuers are most likely to use simple tackle.

Blocks and tackles are useful

- a. Because they allow several rescuers to unite their efforts on a single task.
  - b. Because they are simple to use in most situations.
  - c. Because they increase the working power of the pull.
  - d. Because they are easy to store on a rescue vehicle.
4. The word, triage, dates back to the French language of the 14th century. "Sorting according to quality" was its original meaning; however, its meaning to the firefighter and for first aid practices is that of initial examination and selection of patients and the determination of how each will be handled in order of life-saving emergencies. Obviously, a person with a severed leg will need more immediate attention than a person with a broken arm.

Triage is

- a. The sorting of victims into a priority for treatment.
- b. A system to prevent confusion in an emergency.
- c. The legal theory behind the "Good Samaritan" law.
- d. A common way of evaluating the effectiveness of firefighters.

5. Symptoms of internal bleeding are the same as for shock and treatment is also the same. Blood may sometimes be observed coming from the mouth, ear, and nose of the patient although no injury to these organs is visible. The bleeding point may be in the lungs, stomach, skull, or in passages related to them. The head and shoulders should be raised if there is breathing difficulty. Try to control vomiting and excessive movements and give no stimulants or liquids of any kind even though bleeding ceases. Medical care is urgently needed. If the patient is in shock or unconscious, turn him on his side, with head and chest lower than the hips, to prevent aspiration into the lungs.

In treating a patient for internal bleeding

- a. The patient should be kept still with legs raised.
  - b. The patient may be given water to drink only if the bleeding ceases.
  - c. The patient should not be moved without using a back and neck brace.
  - d. The patient should be turned on their side if unconscious or in shock.
- 
6. The main danger from an electric shock is that it can easily affect the nerves of the heart. It is possible to receive an electrical shock which may not cause an electrical burn, yet a change in the heartbeat pattern can cause cardiac arrest or instant death. It is not likely that an electrical burn from lightning will be observed because a lightning strike is usually fatal.

An electrical shock's main danger is due to

- a. Burns.
- b. Cardiac arrest.
- c. Heat.
- d. Tissue damage.

7. Fire and smoke dampers are used to avoid the possibility of ducts spreading fire and smoke throughout a facility or from one fire area to another. Fire and smoke dampers may be designed for either horizontal or vertical operation. Fire and smoke dampers may be operated by fusible links, heat actuating devices, a manual control or by and combination of methods.

Fire and smoke dampers may

- a. Be designed for vertical operation.
  - b. Be designed for horizontal operation.
  - c. Be designed for vertical or horizontal operation.
  - d. Be designed for vertical and horizontal operation.
8. Fire prevention inspections are the single most important non-fire fighting activity performed by the fire service. A well-planned fire prevention and inspection program, executed by conscientious well-trained individuals, can prevent many fires. Fire prevention inspection practices, while less spectacular than fire fighting, are a less expensive and more effective medium for accomplishing the objectives of the fire service.

The purpose of fire prevention inspections is

- a. Prevent fires from happening.
- b. Educate the public on fire safety.
- c. Provide the Fire Department visibility in the community.
- d. Provide employment for old firefighters.



9. Oxygen-cylinder rebreathing equipment was designed to let the firefighter carry a relatively small supply of breathable oxygen and yet make it last longer per operation by having the carbon dioxide removed from the exhaled breath with a chemical scrubber so the air can be rebreathed. The exhaled air is still relatively high in oxygen and can be supplemented with a small quantity of oxygen stored in a compressed-oxygen cylinder. Rebreathing a quantity of the exhaled air is possible because carbon dioxide and much moisture is removed. The firefighter needs less oxygen directly from the cylinder for breathing. The carbon dioxide scrubber must be changed and the oxygen cylinder recharged or replaced after each use.

An oxygen-cylinder allows a firefighter to carry a small supply of breathable oxygen and makes it last longer by

- a. Compressing more oxygen than normal into the cylinder.
  - b. Pulling oxygen from the surrounding air.
  - c. Using liquid oxygen instead of gaseous oxygen.
  - d. Removing carbon dioxide and much moisture from the exhaled air.
10. Hazardous atmospheres can be found in numerous situation in which fire is not involved. Many industrial processes use extremely dangerous chemicals to make ordinary items. For example, quantities of carbon dioxide would be stored at a facility where wood alcohol, ethylene, dry ice, or carbonated soft drinks are manufactured. Any other specific chemical could be traced to numerous wide-ranging, common products.

Hazardous atmospheres

- a. Is only found in situations where fire is not present.
- b. Is normally not a concern of the firefighter.
- c. Is only found in situations where fire is present.
- d. Can be found in many situations where fire is not present.

ADD

11.    42,500  
      +14,631  
      +   546  
      +55,642  
      + 1,891  
      +    38  
      +   442  
      =

- a.    101,461
- b.    102,820
- c.    103,540
- d.    115,690

SUBTRACT

12.    832  
      - 498  
      =

- a.    66
- b.    304
- c.    334
- d.    404

MULTIPLY

13.    763  
      x 97  
      =

- a.    74,011
- b.    73,500
- c.    72,021
- d.    63,027

DIVIDE

14.    63,918 / 18 =

- a.    3,185
- b.    3,551
- c.    4,311
- d.    5,235

15.    6,164 / 67 =

- a.    75
- b.    83
- c.    89
- d.    92

FRACTION

16.  $5/6 \div 7/8 =$

- a.  $1 \frac{17}{24}$
- b.  $20/21$
- c.  $3/4$
- d.  $35/48$

17.  $45/90 =$

- a.  $1/8$
- b.  $1/3$
- c.  $1/2$
- d.  $3/4$

18.  $3/8 + 1/4 =$

- a.  $1/2$
- b.  $5/8$
- c.  $3/4$
- d.  $1$

DECIMALS

19. Thirty-one Thousandths =

- a. 31,000
- b. 31.001
- c. .31
- d. .0031

20.  $4.1545 \div .35 =$

- a. 11.87
- b. 11.03
- c. 10.51
- d. 8.65

21. 
$$\begin{array}{r} 42.087 \\ + 642.03 \\ + 109.99 \\ + 7421.8 \\ + 14.843 \\ + 480.1 \\ \hline = \end{array}$$

- a. 7,942.24
- b. 8,710.85
- c. 8,907.25
- d. 8,997.34

22. 
$$\begin{array}{r} .997 \\ \times .46 \\ \hline = \end{array}$$

- a. 45.862
- b. 4.5862
- c. .45862
- d. .045862

PERCENTAGES

23.  $2/25 =$

- a. 62.5%
- b. 80%
- c. 6.25%
- d. 8%

24. 40% of 14,840 =

- a. 5,920
- b. 5,936
- c. 11,872
- d. 23,944

BASIC ALGEBRA

25. If  $X = 4$  and  $Y = 2$ , then
- $$2X^2 - XY + 5Y^3 =$$
- a. 10  
b. 50  
c. 64  
d. 80
26. If  $a = 2$ , and  $b = 7$ , then
- $$4a + 5b =$$
- a. 39  
b. 43  
c. 51  
d. 59
27. A fuel tank will hold 1500 gallons. The tank currently has 525 gallons in it. This is what percent of capacity?
- a. 35%  
b. 40%  
c. 50%  
d. 65%
28. A Fire Safety Program can be presented to 175 children every 45 minutes. How many children can be given the presentation in three (3) hours?
- a. 350  
b. 525  
c. 700  
d. 1400
29. Three pumps are connected in a series. One furnishes  $98 \frac{1}{2}$  pounds, the second a pressure of  $121 \frac{3}{8}$  pounds, the third a pressure of  $134 \frac{1}{4}$  pounds. What is the combined pressure of the three pumps?
- a. 353.25  
b. 354.125  
c. 354.7  
d. 355.75
30. At Fire Equipment, LTD, 3 out of every 8 employees must be tested for exposure to tuberculosis. There are 5,600 employees. How many must be tested?
- a. 350  
b. 700  
c. 1,400  
d. 2,100

