



DEPARTMENT OF HUMAN RESOURCES

Study Guide Mosquito Control Specialist Written Examination

- This booklet contains SAMPLE QUESTIONS ONLY. Studying this booklet will not necessarily improve your exam score.

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PURPOSE AND CONTENT OF THIS STUDY GUIDE

This guide was developed to help you prepare to take the written examination for Mosquito Control Specialist. It contains general test-taking advice and also provides specific information related to the exam content. This information includes the subject areas covered by the exam, the kinds of questions to expect, strategies for approaching the questions, and sample questions. Though this information cannot guarantee a higher examination score, it can give you direction for your examination preparation that will assist you in doing your best.

PREPARING TO TAKE THE EXAMINATION

Before the Day of the Exam

- Review this guide to get familiar with the content of the exam. Knowing about the topics and kinds of questions that will be in the exam will ensure that you will not be surprised by the content of the exam or the manner in which it is presented. This can improve your ability to demonstrate your job potential.
- Make sure that you know where the exam will be administered and all of the relevant details, such as where to park, where to report for the exam, and what identification is required.

On the Day of the Exam

- Make sure that you are well rested and have eaten. These things will help your concentration during the exam.
- Plan your day to allow plenty of time to get yourself prepared and get to the exam site. Allow enough time to cope with weather, traffic, parking, etc. Hurrying creates anxiety, so do not put yourself in the position of having to hurry.
- Listen carefully to all instructions from the examination administrator. Make sure that you understand the instructions and carry them out correctly. Ask questions at the proper time before the exam begins if you are unsure of any aspect of what you should do during the exam.

GENERAL EXAM TAKING TIPS

- Use your time carefully. The time limit should provide you with more than enough time if you move through the exam steadily and do not spend too much time on any one question.
- Read the questions and answer choices carefully. Read all of the answer choices before you select an answer.
- If you come to a question that is especially difficult, skip that question and come back to it later if you have time.
- Answer every question. Scores are based on the number of correct answers. You will receive no credit if you leave an answer space blank. It is to your advantage to use your best judgment to make a choice among the answer choices provided.

THE MOSQUITO CONTROL SPECIALIST WRITTEN EXAMINATION

The written examination for Mosquito Control Specialist is based upon a job study that identified the most important knowledge, skills, and abilities required to perform the job successfully. These areas include:

- your skill in reading, understanding, and interpreting job-related written materials.
- your knowledge of safety concerns and practices.
- your knowledge of basic pest control concepts and practices.
- your knowledge of mosquitos, mosquito borne diseases, and mosquito control.

All of the exam questions are presented in a multiple-choice format. Each question is identified by a question number that is followed by a question statement. Unless indicated otherwise, there are between two and four answer choices following the question statement. You should read all of the answer choices and then choose the best answer. **Each question has only one correct answer.**

SECTION 1: READING WITH UNDERSTANDING

This test section contains twenty (20) questions designed to assess your skill in reading, understanding, and applying information from written materials. Examination questions will be preceded by information similar to that which is used on the job such as work procedures, equipment instructions, or educational literature. You will be instructed to read the passage and then answer questions using the information.

A good strategy to use for questions of this type is to read through the entire passage, then read each of the questions, and finally refer back to the information as you answer each question. When reading each question, determine what information the question is specifically looking for by giving careful consideration to each of the words used to convey meaning. For example, does the question ask about a cause or effect? Does it ask you to identify the correct method or sequence for performing tasks?

It is important that you select your answers solely based upon the information provided. The test questions are designed to assess your ability to correctly interpret what is provided, not to assess your knowledge of the subject area addressed by the reading passage.

Examples of these types of questions are shown below. Each question is followed by a brief explanation of the correct answer.

Use the information below to answer sample question #1.

Sprayer Maintenance - Blower

The oil level of the blower should be checked following every thirty hours of operation under normal operating conditions. The oil should be changed every thirty days or after ninety hours of use depending on whichever occurs first. When operation conditions are extremely hot, humid, or dusty the oil level should be checked more often and may require more frequent changes. Every four months, the oil breather plug should be removed, soaked in a solvent, and blown out with compressed air to ensure unobstructed venting.

1. Based on the information provided, which of the following would be the most correct application of the instructions?
 - A. At a minimum, the oil level should be checked every thirty days.
 - B. At a minimum, the oil level should be checked after ninety hours of operation.
 - C. In summer months, the oil level should be checked before the blower has been used for thirty hours.
 - D. It should be standard practice to check the oil level after every thirty hours of use regardless of operating conditions.

Answer: The correct answer to sample question #1 is response choice “C”. The first sentence indicates that the oil level should be checked after thirty hours of use. However, this sentence also notes that this applies to normal operating conditions. The third sentence further explains that conditions of heat, humidity and dust, which are common in summer weather, require that the oil be checked more frequently. Response choices “A” and “B” include the time periods noted for changing the oil rather than checking it. Response choice “D” is incorrect because the passage states that the operating conditions influence how often the oil should be checked.

Use the information below to answer sample question #2.

Personal Protective Equipment

The department will provide employees with one set of the personal protective equipment required to safely perform job tasks. It is the employee's responsibility to properly wear and care for such equipment. This includes attending training sessions on equipment use, inspecting equipment for wear or damage before each use, providing for daily care of the equipment, and promptly reporting any equipment problems. Reports of damaged or malfunctioning equipment should be made to an employee's immediate supervisor who will then request replacement items from the Equipment and Materials Manager. If the Equipment and Materials Manager determines that equipment damage was due to improper use or care of the equipment, the cost of the replacement equipment will be borne by the employee.

2. According to the information provided, under which of the following conditions might an employee have to pay for the replacement of personal protective equipment?
 - A. Whenever a second piece of equipment is issued.
 - B. When the employee has not maintained the equipment correctly.
 - C. When the employee appears to have incomplete knowledge on equipment use.
 - D. When the employee's supervisor recommends that the employee pay for the equipment.

Answer: The correct answer to sample question #2 is response choice "B". The last sentence of the reading passage indicates that employees must pay the cost of equipment replacement when the Equipment and Materials Manager determines that the equipment was not correctly used or cared for. The third sentence of the reading passage provides specific information regarding what constitutes proper wear and care. One of the items listed is "providing for daily care of the equipment". Therefore, not maintaining the equipment correctly, as is indicated in response choice "B", describes an instance of improper care.

Use the information below to answer sample question #3.

Mosquito Identification - Eggs

The three major genera of mosquitos, Anopheles, Aedes, and Culex, can be identified at the egg stage by observing their structure and grouping. Anopheles eggs possess floats while Aedes and Culex eggs lack this feature. The eggs of Anopheles and Aedes are laid separately while Culex eggs are grouped together in rafts.

3. According to the information provided, mosquito eggs that are single units with no floats are what type of mosquito?
- A. Culex.
 - B. Aedes.
 - C. Anopheles.
 - D. Aedes or Culex.

Answer: The correct answer to sample question #3 is response choice “B”. The second sentence of the reading passage indicates that Aedes and Culex eggs do not have floats. The third sentence of the reading passage identifies Anopheles and Aedes eggs as those that are laid singly rather than on a raft. Therefore, only Aedes meets both criteria identified in the question statement (single units without floats).

SECTION 2: WORKPLACE SAFETY

This examination section contains twenty (20) questions designed to assess your knowledge of safe work practices for a field environment. Question content includes topics related to vehicle operation, extreme weather conditions, pesticide use, personal protective equipment, and treating minor injuries. When responding to questions in this area, it is especially important to create a visual image of the situation presented. This will assist you in identifying and evaluating hazards and considering the best approaches for addressing them. Think about each response choice and how the choice would impact the situation. It would also be helpful to familiarize yourself with basic concepts related to pesticide use and first aid.

Examples of the types of questions in this examination section are shown below. Each question is followed by a brief explanation of the correct answer.

4. After working in a wooded area, you discover a tick imbedded in your calf just above your work boots. The best way to remove the tick is to do which of the following?
- A. Douse it with alcohol.
 - B. Brush the tick off with a rag.
 - C. Grab the tick with your fingers and twist it out.
 - D. Grasp the tick with tweezers and pull upward with even pressure.

Answer: The correct answer to sample question #4 is response choice “D”. It is important to be familiar with the types of insects that may present a hazard in the field and how to safely treat bites and stings. One of the greatest hazards associated with ticks is disease transmitted by their mouth parts. Therefore, it is important to precisely and carefully remove the entire tick. Response choice “D” is the approach recommended by the Centers for Disease Control and Prevention for doing this. The other response choices will not remove the tick or may result in only partial removal which will increase the likelihood of disease transmission.

5. What protective equipment should be worn after pesticide application has been completed and you are cleaning up and putting away pesticides and equipment?
- A. All protective equipment used during application should also be worn during clean up.
 - B. It is appropriate to wear gloves, but other protection is no longer needed.
 - C. It is appropriate to wear eye protection, but other protection is no longer needed.
 - D. Protective equipment is no longer necessary once spraying has been completed.

Answer: The correct answer to sample question #5 is response choice “A”. Until all materials are safely stored, they present a risk due to spills or other accidents. Therefore, it is important to continue to use protective equipment during clean up activities.

6. How often should goggles or face shields worn during pesticide application be washed?
- A. Hourly.
 - B. Daily.
 - C. Weekly.
 - D. When they show evidence of accumulated dirt or grime.

Answer: The correct answer to sample question #6 is response choice “B”. When working with pesticides, it is important to wear clean clothing each day and to know how to safely care for clothing exposed to pesticides. Goggles and face shields should be considered part of one’s protective clothing given that they can harbor pesticide residue and come in direct contact with the body.

SECTION 3: BASIC PEST CONTROL CONCEPTS

This part of the examination contains twenty (20) questions that assess your knowledge of basic pest control concepts. Examination content is focused on rodent and mosquito control and includes concepts and terms related to identification, characteristics and life cycle, habitat, disease transmission, and control techniques. Information on these topics can be found in publications offered by organizations that perform or support pest control activities and research such as health departments and the Louisiana Mosquito Control Association.

Examples of the types of questions in this exam section are shown below. Each question is followed by a brief explanation of the correct answer.

7. In pest control, the term “burrow” is used to describe which of the following?
- A. Dense vegetation.
 - B. A nest where rats live.
 - C. A tunnel used for travel.
 - D. An area of accumulated debris.

Answer: The correct answer to sample question #7 is response choice “B”. The term “burrow” is used to describe a rodent nesting area. Such nests may be found in areas with vegetation or accumulated debris, but the nest itself is referred to as a burrow.

8. A homeowner shows you a rodent that was caught in a trap. It is large and bulky with a blunt nose, a tail that is shorter than the length of its body, and no hair on its ears. This rodent is most likely which of the following?
- A. A Roof Rat.
 - B. A Cotton Rat.
 - C. A Norway Rat.
 - D. A mature field mouse.

Answer: The correct answer to sample question #8 is response choice “C”. Norway Rats, also frequently called brown or sewer rats, are large, bulky rats that can grow to lengths of 13-16 inches from nose to tip of the tail. They are characterized by blunt snouts and tails that are shorter than body length.

9. After mosquito eggs are laid, they next transition to which of the following?
- A. Adult.
 - B. Pupae.
 - C. Nymph.
 - D. Larvae.

Answer: The correct answer to sample question #9 is response choice “D”. Mosquito development occurs in four stages: egg, larvae, pupae, adult. It is important to know the stages and their characteristics for proper identification and control of mosquito populations.

SECTION 4: MOSQUITO CONTROL

This part of the examination contains twenty (20) questions that assess your knowledge of mosquito control concepts, terminology, and techniques. Question content includes mosquito identification, biology, and control including environmental and chemical controls. Knowledge of mosquito-transmitted diseases is also addressed in this examination section. Information on these topics can be found in publications offered by organizations that perform or support pest control activities and research such as health departments and the Louisiana Mosquito Control Association.

Examples of the types of questions in this examination section are shown below. Each question is followed by a brief explanation of the correct answer.

10. Which of the following is accurate about mosquito eggs that have been laid out of water in an area subject to intermittent flooding?
- A. The eggs can hatch without water.
 - B. The eggs will remain vital for a few weeks without water.
 - C. The eggs will remain vital for a few months without water.
 - D. The eggs can lay dormant for years until hatching conditions are met.

Answer: The correct answer to sample question #10 is response choice “D”. It is important to know the different types of mosquitos and the conditions in which they reproduce. Some mosquitos are considered “floodwater” species. Such species lay eggs out of water in areas subject to flooding and the eggs may lay dormant for years until ideal natural hatching conditions are met.

11. All of the following are considered “dead-end” hosts for West Nile Virus except:
- A. cats.
 - B. mice.
 - C. birds.
 - D. horses.

Answer: The correct answer to sample question #11 is response choice “C”. It is important to know significant diseases transmitted by mosquitoes including their characteristics. West Nile virus is transmitted naturally between birds by certain species of mosquitos. Humans, dogs, cats, horses, and other vertebrates are considered accidental or dead-end hosts which means that, though they may contract the virus, they are not capable of passing the virus on to uninfected mosquitos.

12. You are planning to apply pesticide to two adjacent, same-sized, rectangular-shaped lots and must determine the total area in square feet in order to use the correct amount of product. The size of each lot is 150 feet deep (long) and 100 feet wide and the formula for the area of a rectangle is length times width. Given this, what is the combined square footage of the two lots?
- A. 15,000 square feet.
 - B. 20,000 square feet.
 - C. 25,000 square feet.
 - D. 30,000 square feet.

Answer: The correct answer to sample question #12 is response choice "D". The area for a single lot is length times width (150 feet x 100 feet = 15,000 square feet). The total square footage is calculated by adding the square footage for the two lots. Since they are the same size, this calculation is: 15,000 square feet + 15,000 square feet = 30,000 square feet.

ADDITIONAL ASSISTANCE

If you feel that you would benefit from more practice, your local library or relevant internet web sites may have reference materials that can be helpful. This is true for all of the subject areas covered by the Mosquito Control Specialist written examination.