

**Registration form**

**Ant Control CEU Training Course \$150.00  
48 HOUR RUSH ORDER PROCESSING FEE ADDITIONAL \$50.00**

**Start and finish dates:** \_\_\_\_\_

*You will have 90 days from this date in order to complete this course*

**Print Name** \_\_\_\_\_

I have read and understood the disclaimer notice found on pages 2 & 6. Signature is required.

**Signature** \_\_\_\_\_

**Address:** \_\_\_\_\_

**City** \_\_\_\_\_ **State** \_\_\_\_\_ **Zip** \_\_\_\_\_

**Phone:**  
**Home** (\_\_\_\_\_) \_\_\_\_\_ **Work** (\_\_\_\_\_) \_\_\_\_\_

**Fax** (\_\_\_\_\_) \_\_\_\_\_ **Email** \_\_\_\_\_

**License or  
Operator ID #** \_\_\_\_\_ **Exp. Date** \_\_\_\_\_

**Class/Grade** \_\_\_\_\_

Please circle/check which certification you are applying the course CEU's.

Commercial Applicator \_\_\_\_\_ Residential Applicator \_\_\_\_\_ Industrial Applicator \_\_\_\_\_

Pesticide Handler \_\_\_\_\_ Agricultural Applicator \_\_\_\_\_ Adviser \_\_\_\_\_ Other \_\_\_\_\_

*Your certificate will be e- mailed to you in about two weeks.*

**Technical Learning College PO Box 3060, Chino Valley, AZ 86323  
Toll Free (866) 557-1746 Fax (928) 272-0747 E-Mail [info@tlch2o.com](mailto:info@tlch2o.com)**

If you've paid on the Internet, please write your Customer# \_\_\_\_\_

Please invoice me, my PO# \_\_\_\_\_

Please pay with your credit card on our website under Bookstore or Buy Now. Or call us and provide your credit card information.

*We will stop mailing the certificate of completion so we need either your fax number or e-mail address. We will e-mail the certificate to you, if no e-mail address; we will fax it to you.*

## Important Information about this Course (Disclaimer Notice)

This CEU course has been prepared to educate pesticide applicators and operators in general safety awareness of dealing with the often-complex and various pesticide treatment sprays, devices, methods, and applications. This course (manual) will cover general laws, regulations, required procedures and accepted policies relating to the use of pesticides and herbicides. It should be noted, however, that the regulation of pesticides and hazardous materials is an ongoing process and subject to change over time. For this reason, a list of resources is provided to assist in obtaining the most up-to-date information on various subjects. This manual is not a guidance document for applicators or operators who are involved with pesticides. It is not designed to meet the requirements of the United States Environmental Protection Agency or your local State environmental protection agency or health department. This course manual will provide general pesticide safety awareness and should not be used as a basis for pesticide treatment method/device guidance. This document is not a detailed pesticide informational manual or a source or remedy for poison control.

Technical Learning College or Technical Learning Consultants, Inc. makes no warranty, guarantee or representation as to the absolute correctness or appropriateness of the information in this manual and assumes no responsibility in connection with the implementation of this information. It cannot be assumed that this manual contains all measures and concepts required for specific conditions or circumstances. This document should be used for educational purposes only and is not considered a legal document. Pesticides are poisonous. Always read and carefully follow all precautions and safety recommendations given on the container label. Store all chemicals in the original labeled containers in a locked cabinet or shed, away from food or feeds, and out of the reach of children, unauthorized persons, pets, and livestock.

Confine chemicals to the property or plants being treated. Avoid drift onto neighboring properties, especially gardens containing fruits and/or vegetables ready to be picked. Dispose of empty containers carefully. Follow label instructions for disposal. Never reuse containers. Make sure empty containers are not accessible to children or animals. Never dispose of containers where they may contaminate water supplies or natural waterways. Do not pour down sink or toilet. Consult your county agricultural commissioner for correct ways of disposing of excess pesticides. You should never burn pesticide containers.

Individuals who are responsible for pesticide storage, mixing and application should obtain and comply with the most recent federal, state, and local regulations relevant to these sites and are urged to consult with the EPA and other appropriate federal, state and local agencies.

**USE PESTICIDES WISELY: ALWAYS READ THE ENTIRE PESTICIDE LABEL CAREFULLY, FOLLOW ALL MIXING AND APPLICATION INSTRUCTIONS AND WEAR ALL RECOMMENDED PERSONAL PROTECTIVE GEAR AND CLOTHING. CONTACT YOUR STATE DEPARTMENT OF AGRICULTURE FOR ANY ADDITIONAL PESTICIDE USE REQUIREMENTS, RESTRICTIONS OR RECOMMENDATIONS.**

**NOTICE: MENTION OF PESTICIDE PRODUCTS IN THIS COURSE DOES NOT CONSTITUTE ENDORSEMENT OF ANY MATERIAL OR HERB OR HERBAL SUPPLEMENT. ALWAYS FOLLOW THE PRODUCT'S LABEL INSTRUCTIONS.**

### **NOTICE**

I understand that it is my responsibility to ensure that this CEU course is either approved or accepted in my State for CEU credit. I understand State laws and rules change on a frequent basis and I believe this course is currently accepted in my State for CEU or contact hour credit, if it is not, I will not hold Technical Learning College responsible. I fully understand that this type of study program deals with dangerous, changing conditions and various laws and that I will not hold Technical Learning College, Technical Learning Consultants, Inc. (TLC) liable in any fashion for any errors, omissions, advice, suggestions or neglect contained in this CEU education training course or for any violation or injury, death, neglect, damage or loss of your license or certification caused in any fashion by this CEU education training or course material suggestion or error or my lack of submitting paperwork. It is my responsibility to call or contact TLC if I need help or assistance and double-check to ensure my registration page and assignment has been received and graded. It is my responsibility to ensure all information is correct and to abide with all rules and regulations.

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*You can obtain a printed version of the course manual from TLC for an additional \$69.95 plus shipping charges.*

## **AFFIDAVIT OF EXAM COMPLETION**

I affirm that I personally completed the entire text of the course. I also affirm that I completed the exam without assistance from any outside source. I understand that it is my responsibility to file or maintain my certificate of completion as required by the state or by the designation organization.

## **Grading Information**

In order to maintain the integrity of our courses we do not distribute test scores, percentages or questions missed. Our exams are based upon pass/fail criteria with the benchmark for successful completion set at 70%. Once you pass the exam, your record will reflect a successful completion and a certificate will be issued to you. For security purposes, please fax or e-mail a copy of your driver's license and always call us to confirm we've received your assignment and to confirm your identity.

## **Rush Grading Service**

If you need this assignment graded and the results mailed to you within a 48-hour period, prepare to pay an additional rush service handling fee of \$50.00. This fee may not cover postage costs. If you need this service, simply write RUSH on the top of your Registration Form. We will place you in the front of the grading and processing line.

**Do not solely depend on TLC's Approval list for it may be outdated.**

**Some States and many employers require the final exam to be proctored.**

<http://www.abctlc.com/downloads/PDF/PROCTORFORM.pdf>

**A second certificate of completion for a second State Agency \$50 processing fee.**

**All downloads are electronically tracked and monitored for security purposes.**

**No refunds.**



# Ant Control CEU Training Course Answer Key

Name \_\_\_\_\_ Phone \_\_\_\_\_

You are solely responsible in ensuring this course is accepted by your State for credit. Did you check with your State agency to ensure this course is accepted for credit?

*Method of Course acceptance confirmation. Please fill this section*

Website \_\_\_ Telephone Call \_\_\_ Email \_\_\_ Spoke to \_\_\_\_\_

Did you receive the approval number, if applicable? \_\_\_\_\_

What is the course approval number, if applicable? \_\_\_\_\_

*You are responsible to ensure that TLC receives the Assignment and Registration Key. Please call us to ensure that we received it.*

Please circle or bold or X the best answer      Circle or underline test version  
#1 #2 #3 #4 #5

## Topic 1 - One Node Ant Identification and Control Section

- |              |               |               |
|--------------|---------------|---------------|
| 1. A B C D E | 6. A B C D E  | 11. A B C D E |
| 2. A B C D E | 7. A B C D E  | 12. A B C D E |
| 3. A B C D E | 8. A B C D E  | 13. A B C D E |
| 4. A B C D E | 9. A B C D E  | 14. A B C D E |
| 5. A B C D E | 10. A B C D E | 15. A B C D E |

## Topic 2 – Two Node Ant Identification and Control Section

- |              |               |               |
|--------------|---------------|---------------|
| 1. A B C D E | 6. A B C D E  | 11. A B C D E |
| 2. A B C D E | 7. A B C D E  | 12. A B C D E |
| 3. A B C D E | 8. A B C D E  | 13. A B C D E |
| 4. A B C D E | 9. A B C D E  | 14. A B C D E |
| 5. A B C D E | 10. A B C D E | 15. A B C D E |

## Topic 3 – Termite Section

- |              |               |               |
|--------------|---------------|---------------|
| 1. A B C D E | 6. A B C D E  | 11. A B C D E |
| 2. A B C D E | 7. A B C D E  | 12. A B C D E |
| 3. A B C D E | 8. A B C D E  | 13. A B C D E |
| 4. A B C D E | 9. A B C D E  | 14. A B C D E |
| 5. A B C D E | 10. A B C D E | 15. A B C D E |

**Topic 4 – Topic 4 – Ant and Termite Management Section**

- |              |               |               |
|--------------|---------------|---------------|
| 1. A B C D E | 6. A B C D E  | 11. A B C D E |
| 2. A B C D E | 7. A B C D E  | 12. A B C D E |
| 3. A B C D E | 8. A B C D E  | 13. A B C D E |
| 4. A B C D E | 9. A B C D E  | 14. A B C D E |
| 5. A B C D E | 10. A B C D E | 15. A B C D E |

**Topic 5 – Topic 5 – Advanced Ant and Termite Management Section**

- |              |               |               |
|--------------|---------------|---------------|
| 1. A B C D E | 6. A B C D E  | 11. A B C D E |
| 2. A B C D E | 7. A B C D E  | 12. A B C D E |
| 3. A B C D E | 8. A B C D E  | 13. A B C D E |
| 4. A B C D E | 9. A B C D E  | 14. A B C D E |
| 5. A B C D E | 10. A B C D E | 15. A B C D E |

Please fax or email this and the registration Page to TLC.  
Call 15 minutes later to ensure we have received the paperwork

*Please e-mail or fax this survey along with your final exam*

**ANT CONTROL CEU COURSE  
PROFESSIONAL DEVELOPMENT COURSE  
CUSTOMER SERVICE RESPONSE CARD**

NAME: \_\_\_\_\_

E-MAIL \_\_\_\_\_ PHONE \_\_\_\_\_

**PLEASE COMPLETE THIS FORM BY CIRCLING THE NUMBER OF THE APPROPRIATE ANSWER IN THE AREA BELOW.**

1. Please rate the difficulty of your course.

Very Easy 0 1 2 3 4 5 Very Difficult

2. Please rate the difficulty of the testing process.

Very Easy 0 1 2 3 4 5 Very Difficult

3. Please rate the subject matter on the exam to your actual field or work.

Very Similar 0 1 2 3 4 5 Very Different

4. How did you hear about this Course? \_\_\_\_\_

5. What would you do to improve the Course?

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How about the price of the course?

Poor \_\_\_\_ Fair \_\_\_\_ Average \_\_\_\_ Good \_\_\_\_ Great \_\_\_\_

How was your customer service?

Poor \_\_\_\_ Fair \_\_\_\_ Average \_\_\_\_ Good \_\_\_\_ Great \_\_\_\_

Any other concerns or comments.

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## **ASSIGNMENT INSTRUCTIONS**

1. We will require all students to fax or e-mail a copy of their driver's license with the registration form.
2. You will need to pick one of the following four assignments to complete. This selection process is based upon your last name.
3. If your last name begins with an A to G, you will pick assignment number 1, if your last name begins with the letter H to P, you are to complete assignment number 2 and if your last name begins with the letter Q-R, you will pick assignment number 3, and if your last name begins with the letter S-Z, you will pick assignment number 4.

Assignment # 1 for all pest applicators whose last name begins with A-G you will find your assignment on pages 9-19.

Assignment #2 for all pest applicators whose last name begins with the letter H-P, your assignment is found on pages 21-30.

Assignment #3 for all pest applicators whose last name begins with the letter Q-R, your assignment is found on pages 31-40.

Assignment #4 for all pest applicators whose last name begins with the letter S-Z, your assignment is found on pages 41-50.

Return students: Your assignment is number 5 pages 51-60

## **AFFIDAVIT OF EXAM COMPLETION**

I affirm that I personally completed the entire text of the course. I also affirm that I completed the exam without assistance from any outside source. I understand that it is my responsibility to file or maintain my certificate of completion as required by the state or by the designation organization.

## **Grading Information**

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For security purposes, please fax or e-mail a copy of your driver's license and always call us to confirm we've received your assignment and to confirm your identity.

Thank you...



# Ant Control CEU Training Awareness Assignment #1

## Last Names A-G

You will have 90 days from the start of this course to have successfully passed this assignment with a score of 70 %. You may e mail the answers to TLC, info@tlch2o.com or fax the answers to TLC, (928) 272-0747. This assignment is available to you in a Word Format on TLC's Website. Once you have paid the course fee, you will be provided complete course support from Student Services (928) 468-0665.

### Write your answers on the Answer Key found in the front of this assignment.

1. We will require all students to fax or e-mail a copy of their driver's license with the registration form.
2. You will need to pick one of the following four assignments to complete. This selection process is based upon your last name.
3. If your last name begins with an A to G, you will pick assignment number 1, if your last name begins with the letter H to P, you are to complete assignment number 2 and if your last name begins with the letter Q-R, you will pick assignment number 3, and if your last name begins with the letter S-Z, you will pick assignment number 4.
4. Repeat student shall complete assignment number 5 in the rear.

## Topic 1 - 1 Node Ant Identification and Control Section

### Ant Introduction

1. Ants are beneficial organisms in the balance of nature. In nature, ants greatly reduce the amount of dead and decaying plant and animal organic matter. They also aerate the soil with their nests.  
A. TRUE      B. FALSE

### Ant Infestations

2. Ant infestations are not easy to control and different strategies should be used depending on \_\_\_\_\_ of the ants.  
A. Active nests      D. Nest location and food preferences  
B. Ant infestations      E. None of the Above  
C. Nest galleries

### Head

3. An ant's head contains \_\_\_\_\_. Like most insects, ants have compound eyes made from numerous tiny lenses attached together.  
A. Egg-laying structures      D. Many sensory organs  
B. Mesosoma ("thorax")      E. None of the Above  
C. Two antennae ("feelers")
4. Which of the following terms are attached to the head; these organs detect chemicals, air currents, and vibrations; they also are used to transmit and receive signals through touch?  
A. Eyes      D. Wings  
B. Mesosoma ("thorax")      E. None of the Above  
C. Two antennae ("feelers")

### **Mesosoma**

5. Both the \_\_\_\_\_ of the ant are attached to the mesosoma ("thorax"). The legs terminate in a hooked claw which allows them to hook on and climb surfaces.
- A. Reproductive structures    D. Arms and wings  
B. Legs and wings            E. None of the Above  
C. Arms and legs
6. Only reproductive ants, queens, and males, have \_\_\_\_\_.
- A. Stingers                    D. Wings  
B. Extra set of legs           E. None of the Above  
C. Communication
7. Workers of many species have their egg-laying structures modified into \_\_\_\_\_ that are used for subduing prey and defending their nests.
- A. Egg-laying structures    D. Wings  
B. Excretory systems        E. None of the Above  
C. Stinger(s)

### **IPM Control Program**

8. An Integrated Pest Management (IPM) approach offers a slight chance for control of ants. An IPM approach suggests but a few of control methods into a pest management program. IPM methods include chemical strategies.
- A. TRUE    B. FALSE

### **Carpenter Ants - 1 Node ant – Wood Destroyer**

9. Carpenter ants tunnel into wood to form nest galleries. If they go unnoticed for several years, they may cause structural damage. Outdoors, the ants use dead trees or tree limbs, stumps, logs or areas under stones as nesting sites.
- A. TRUE    B. FALSE
10. Treatment options include use of a \_\_\_\_\_ applied as a dust or spray to the nest.
- A. Insecticide dilutions        D. Bait or residual contact insecticide  
B. Dust or spray                E. None of the Above  
C. Bait treatments
11. Read and follow the product label for best results. It may be necessary to drill small holes in the wall voids, baseboards, and window and doorsills to reach the nest or major part of the colony. Nests can also be removed and infested wood replaced, if feasible.
- A. TRUE    B. FALSE
12. Carpenter ants are least active in the evening hours, foraging for all kinds of food, outside. By following the ants, you will never be able to tell where the nest is.
- A. TRUE    B. FALSE
13. Because carpenter ants keep the \_\_\_\_\_ very clean and push the sawdust and dead insect parts out small holes in the wood, a small, fresh pile of sawdust under the nest timber is the usual sign of an active carpenter ant nest.
- A. Active nests                D. Tunneled galleries  
B. Wall voids                 E. None of the Above  
C. Nest galleries

14. If it is difficult to locate the nest, a(n) \_\_\_\_\_ can be applied into wall voids through electrical outlets.
- A. Insecticide dilutions
  - B. Insecticidal dust
  - C. Bait treatments
  - D. Spray the product in a band
  - E. None of the Above

### Perimeter Insecticide Treatments

15. The most commonly used method for controlling carpenter ants is treating the perimeter of a home with a \_\_\_\_\_.
- A. Insecticide dilution
  - B. Dust or spray
  - C. Bait treatment
  - D. Spray product
  - E. None of the Above

**Please complete all the sections before submitting the answer key.**

## Topic 2 - 2 Node Ant Identification and Control Section

### Ant Bait Treatments

1. Which of the following missing terms and insecticides can be used to control ants in the outside nest?
- A. Insecticide dilutions
  - B. Cellose
  - C. Bait treatments
  - D. Product in a band
  - E. None of the Above
2. Which of the following missing terms can be used outside to successfully drench ant nests? Be sure to follow label recommendations for correct procedures when applying the insecticide.
- A. Insecticide dilutions
  - B. Dust or spray
  - C. Bait treatments
  - D. Spray the product in a band
  - E. None of the Above
3. Most retail products are \_\_\_\_\_ containing hydramethylnon, sulfluramid, abamectin, or boric acid.
- A. Insecticide dilutions
  - B. Dust or spray
  - C. Bait treatments
  - D. Liquid or granular formulations
  - E. None of the Above

### Outdoors

4. Often carpenter ant nests found indoors are satellite nests that can be traced back to a parent colony outdoors in trees, stumps, roots, fence posts, landscape timbers, and other wood structures.
- A. TRUE
  - B. FALSE
5. When possible, remove wood that contains carpenter ant nests, or destroy the colony. When this is not practical, and carpenter ants have been discovered entering your home from outdoor nests, a treatment with a \_\_\_\_\_ around the building's exterior helps keep them out of your home.
- A. Insecticide dilutions
  - B. Residual insecticide
  - C. Bait treatments
  - D. Non-residual insecticide
  - E. None of the Above

6. Which of the following missing terms, covering the foundation and under the lower edge of the siding to help keep ants from coming inside?
- A. Insecticide dilutions
  - B. Dust
  - C. Bait treatments
  - D. Spray the product in a band
  - E. None of the Above

### **Pesticide Treatments General Applications**

7. Chemical Control. Ants can be controlled with baits, crack and crevice treatments, indoor space and surface treatments, outdoor barrier and broadcast treatments, as well as void and attic treatments.

- A. TRUE
- B. FALSE

8. Since ants do not rely on trophallaxis (reciprocal feeding), the bait toxicant cannot be thoroughly distributed to the members of the colony, including the queen and brood.

- A. TRUE
- B. FALSE

9. Quick-kill insecticides and baits will only kill the foraging ants, not allowing the foraging ants to take the bait back home to feed the queen, nest workers and brood.

- A. TRUE
- B. FALSE

### **Key**

10. The key to using baits is excess. Applied properly and using a fresh bait product, a broadcast application will give 50% to 60% control, rarely 70%.

- A. TRUE
- B. FALSE

### **Nest Treatments**

11. Unless you can treat the nest directly, spraying is an effective solution for small ants, never use a non-repellent insecticides or "undetectable" liquid treatments such as Dominion 2L, Termidor or Phantom. Phantom liquid or aerosol is labeled for the inside.

- A. TRUE
- B. FALSE

### **Carpenter Ant Infestations**

12. To prevent further carpenter ant infestations, trim all trees and bushes so branches do not touch the house and correct moisture problems such as leaky roofs and plumbing. Paint and/or seal exposed wood construction before it becomes wet.

- A. TRUE
- B. FALSE

### **Signs and Symptoms of Pesticide Poisoning**

#### **Recognizing Signs and Symptoms of Poisoning**

13. Anyone who may become exposed to pesticides should be aware of the signs and symptoms of pesticide poisoning.

- A. TRUE
- B. FALSE

14. Prompt action during pesticide overexposure will not prevent serious consequences. Poisoning signs cannot be seen by others, for example, vomiting, sweating, or pin-point pupils.

- A. TRUE
- B. FALSE

15. In a pesticide emergency, identify the pesticide to which the victim was exposed. Provide this information to medical authorities.

- A. TRUE
- B. FALSE

## Topic 3 – Termite Section

15 Final Questions

Identify the following pictures.

1. This is \_\_\_\_\_?

- A. Soldier
- B. Worker
- C. Swarmer
- D. Queen
- E. None of the Above

2. This is \_\_\_\_\_?

- A. Soldier
- B. Worker
- C. Swarmer
- D. Queen
- E. None of the Above

3. This is \_\_\_\_\_?

- A. Soldier
- B. Worker
- C. Swarmer
- D. Queen
- E. None of the Above

4. This is \_\_\_\_\_?

- A. Soldier
- B. Worker
- C. Swarmer
- D. Queen
- E. None of the Above

5. These are \_\_\_\_\_?

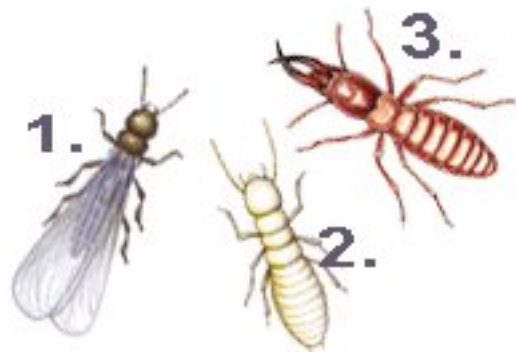
- A. Soldiers
- B. Workers
- C. Swarmers
- D. Queens
- E. None of the Above

6. These are?

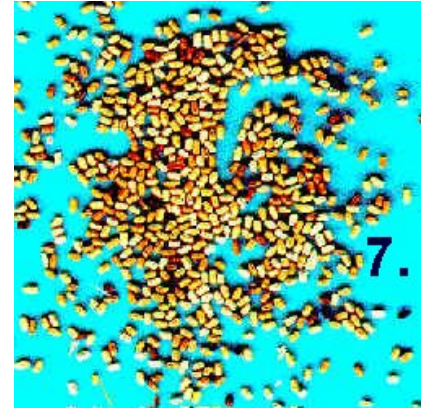
- A. Mud Holes
- B. Frass
- C. Alates
- D. Fungus
- E. None of the Above

7. These are?

- A. Mud Holes
- B. Frass
- C. Alates
- D. Fungus
- E. None of the Above



8. This is ?  
 A. Mud Tubes  
 B. Frass  
 C. Alates  
 D. Fungus  
 E. None of the Above



9. This is ?  
 A. Mud Tubes  
 B. Frass  
 C. Alates  
 D. Fungus  
 E. None of the Above



**Feeding Habits**

10. Termites feed mainly on wood and wood products containing \_\_\_\_\_.
- |                 |                      |
|-----------------|----------------------|
| A. Moisture     | D. Wood              |
| B. Cellulose(s) | E. None of the Above |
| C. Mud          |                      |

**Below Ground Termite Colonies**

11. The colony may be up to 18-20 feet deep in the ground. The ground serves as a protection against \_\_\_\_\_ and provides a moisture reservoir.

- |               |                         |
|---------------|-------------------------|
| A. Treatments | D. Extreme temperatures |
| B. Ants       | E. None of the Above    |
| C. Enemies    |                         |

12. Termites reach wood or this missing term above ground by constructing and traveling through earthen (mud) tubes?

- |                        |                        |
|------------------------|------------------------|
| A. Nest                | D. Wood of a structure |
| B. Cellulose materials | E. None of the Above   |
| C. Mud                 |                        |

13. Which of the following do not need a connection to soil and there is no soil in their feeding galleries? They do not build mud tunnels; they construct large, irregular galleries that run across and with the wood grain, with a very smooth, clean, and sandpaper-like appearance.

- A. Drywood termites
- B. Desert subterranean termite(s)
- C. Pacific Dampwood termite(s)
- D. Western subterranean termite(s)
- E. None of the Above

**Workers**

14. The first broods of newly hatched nymphs (young termites) generally develop into \_\_\_\_\_.

- A. Soldier(s)
- B. Worker(s)
- C. Alate
- D. Nymph(s)
- E. None of the Above

**Termite Identification Section**

15. Which of the following are almost an inch long that is quite a bit larger than the Subterranean or the Drywood variety.

- A. Formosan termite(s)
- B. Desert subterranean termite(s)
- C. Dampwood termite(s)
- D. Western subterranean termite(s) or Subterranean
- E. None of the Above

**Topic 4 – Ant and Termite Management**

1. The pyrethroids are a large family of modern synthetic insecticides similar to the naturally derived \_\_\_\_\_.

- A. Botanical pyrethrins
- B. Fipronil
- C. Permethrin
- D. Chlorfenapyr
- E. None of the Above

2. At low levels, however, \_\_\_\_\_ is only minimally toxic, and perhaps beneficial, to humans, other mammals, and growing plants.

- A. Termidor®
- B. Fipronil
- C. Permethrin
- D. Boron
- E. None of the Above

3. Use of \_\_\_\_\_-treated wood for construction of homes and their wood-based contents appears to offer many advantages to today's environmentally sensitive world.

- A. Termidor®
- B. Fipronil
- C. Permethrin
- D. Borate
- E. None of the Above

4. Which of the following terms is the only termiticide from the pyrrole family of chemistry and is active primarily as a stomach poison with some contact activity. It is also non-repellent to termites?

- A. Termidor®
- B. Fipronil
- C. Permethrin
- D. Chlorfenapyr
- E. None of the Above

5. Fipronil is the only insecticide in this new class, introduced in 1990 and registered in the U.S. in 1996. It is marketed as a termiticide under the tradename \_\_\_\_\_. This termiticide is a non-repellent material with contact and stomach activity.

- A. Termidor®
- B. Fipronil
- C. Permethrin
- D. Chlorfenapyr
- E. None of the Above

6. Drilling may be required along the foundation walls, along one side of partition walls, along both sides of \_\_\_\_\_, around sewer pipes, floor drains, conduits, and any crack in the basement floor.

- A. Insecticide barrier
- B. Load-bearing wall
- C. Crawl space area
- D. Interior vertical barrier
- E. None of the Above

7. Using a sub-slab injector, inject the insecticide at the rate of 4 gallons per 10 linear feet. For an insecticide barrier around the \_\_\_\_\_, apply an insecticide by rodding and/or trenching.

- A. Exterior of foundation walls
- B. Continuous chemical barrier
- C. Crawl space area
- D. Interior vertical barrier
- E. None of the Above

8. The rod holes should be spaced 1 to 1 1/2 feet apart to provide a \_\_\_\_\_. If a trench is necessary, it should not be wider than 6 inches. Inject insecticide using rodding technique at the rate of 4 gallons per 10 linear feet. Cover the trench with untreated soil.

- A. Insecticide barrier
- B. Continuous chemical barrier
- C. Crawl space area
- D. Interior vertical barrier
- E. None of the Above

### **Crawl Spaces**

9. Establish \_\_\_\_\_ by rodding and/or trenching procedures. A shallow trench should not be wider than 6 inches. Space rod holes about 1 to 1 1/2 feet apart.

- A. Insecticide barrier(s)
- B. Continuous chemical barrier(s)
- C. Crawl space area(s)
- D. Vertical barrier(s)
- E. None of the Above

10. Apply insecticide at the rate of 4 gallons per 10 linear feet per foot of depth. Do not treat soil in \_\_\_\_\_ with a broadcast insecticide spray.

- A. Insecticide barrier
- B. Continuous chemical barrier
- C. Crawl space area
- D. Interior vertical barrier
- E. None of the Above

### **Hollow Masonry Units of the Foundation Walls**

11. Treat through masonry voids to provide a \_\_\_\_\_ at the top of the footing.

- A. Insecticide barrier
- B. Continuous chemical barrier
- C. Treatment
- D. Spray barrier
- E. None of the Above



12. When \_\_\_\_\_ is necessary, access holes must be drilled through mortar joints below the sill plate, as close as possible to the footing. Apply insecticide at the rate of 2 gallons per 10 linear feet. Plug all holes with mortar or any other special compound.
- A. Insecticide barrier
  - B. Continuous chemical barrier
  - C. Treatment
  - D. Interior vertical barrier
  - E. None of the Above

### **Mud Tube Removal**

13. State regulations require pest control operators to remove termite tubes as part of a \_\_\_\_\_.

- A. Termite infestation
- B. Continuous chemical barrier
- C. Lifetime protection
- D. Complete termite treatment
- E. None of the Above

14. Removing the tubes provides a way to determine if a \_\_\_\_\_ remains active after treatment or if the termites reappear in the same area later.

- A. Termite infestation
- B. Continuous chemical barrier
- C. Lifetime protection
- D. Complete termite treatment
- E. None of the Above

15. Control products containing inorganic borate can be applied to lumber at the time of construction, or later if exposed, to provide lifetime protection from \_\_\_\_\_ as long as the wood remains dry.

- A. Infestation
- B. Chemical barrier
- C. Contamination
- D. Complete termite treatment
- E. None of the Above

## **Topic 5- Advanced Ant and Termite Management Section**

**Identify the pesticide trade name with the common name.**

1. Equity

- A. Cypermethrin
- B. Bendiocarb
- C. Chlorpyrifos
- D. Permethrin
- E. None of the Above

2. Demon TC

- A. Cypermethrin
- B. Bendiocarb
- C. Chlorpyrifos
- D. Permethrin
- E. None of the Above

3. Ficam

- A. Cypermethrin
- B. Bendiocarb
- C. Chlorpyrifos
- D. Permethrin
- E. None of the Above

4. Dursban TC

- A. Cypermethrin
- B. Bendiocarb
- C. Chlorpyrifos
- D. Permethrin
- E. None of the Above

5. Dagnet FT  
A. Cypermethrin      D. Permethrin  
B. Bendiocarb      E. None of the Above  
C. Chlorpyrifos

### **Fumigation Application**

6. Application methods differ depending upon (i) the fumigant formulation being used, (ii) site/area being treated and (iii) the weather.  
A. TRUE      B. FALSE

### **Adjacent Enclosed Area**

7. If people or domestic animals may enter into this area during the fumigation or aeration process, you are required to conduct monitoring to be sure no one is exposed above the permitted level of 30 ppm on an 8-hour time weighted average.  
A. TRUE      B. FALSE

### **Fumigation Management Plan**

8. A Fumigation Management Plan (FMP) is a written description of the steps designed to plan for a safe, legal and effective fumigation.  
A. TRUE      B. FALSE

### **Monitoring for Safety**

9. Monitoring for safety is always suggested unless it can be confirmed/concluded by the certified applicator that there is slight possibility of exposure to phosphine at or above the allowable limits to workers or bystanders.  
A. TRUE      B. FALSE

### **Termite Control Methods Summary**

10. All termite control methods can be categorized as either whole structure or localized. A whole-structure treatment is defined as the simultaneous treatment of all infestations, accessible and inaccessible, in a structure.  
A. TRUE      B. FALSE

11. Localized or spot treatment is more restrictive and is often applied to a single board or small group of boards.  
A. TRUE      B. FALSE

### **Heat**

12. Heat is a nonchemical option for whole-structure treatment. The treatment process involves heating all wood in the structure to a minimum of 220°F and holding this temperature for at least 33 minutes.  
A. TRUE      B. FALSE

### **Localized Treatments**

13. There are many localized treatment methods available that include both chemical and nonchemical options. For liquid and dust insecticides to be effective, termites must make contact with them or ingest them.  
A. TRUE      B. FALSE

**Liquid Application with Repellent**

14. This combination of methods involves using liquid pesticide in the same manner described above. However, instead of using bait as an additional form of termite prevention, this method combines the liquid pesticide application with an application of termite repellent.

A. TRUE      B. FALSE

15. The benefit of using a repellent product instead of a bait product is that repellents can be used both inside and outside the home. If a termite gets past the barriers to entry (the liquid repellent), the termite will encounter the repellent that makes the environment inhospitable.

A. TRUE      B. FALSE



## Ant Control CEU Training Awareness Assignment #2

### Last Names H-P

You will have 90 days from the start of this course to have successfully passed this assignment with a score of 70 %. You may e mail the answers to TLC, info@tlch2o.com or fax the answers to TLC, (928) 272-0747. This assignment is available to you in a Word Format on TLC's Website. Once you have paid the course fee, you will be provided complete course support from Student Services (928) 468-0665.

#### Write your answers on the Answer Key found in the front of this assignment.

1. We will require all students to fax or e-mail a copy of their driver's license with the registration form.
2. You will need to pick one of the following four assignments to complete. This selection process is based upon your last name.
3. If your last name begins with an A to G, you will pick assignment number 1, if your last name begins with the letter H to P, you are to complete assignment number 2 and if your last name begins with the letter Q-R, you will pick assignment number 3, and if your last name begins with the letter S-Z, you will pick assignment number 4.
4. Repeat students shall complete assignment number 5.

### Topic 1 - 1 Node Ant Identification and Control Section

#### Ant Introduction

1. Ants are beneficial organisms in the balance of nature. In nature, ants greatly reduce the amount of dead and decaying plant and animal organic matter. They also aerate the soil with their nests.  
A. TRUE      B. FALSE
2. Ants can be controlled with a combination of good sanitation, removing \_\_\_\_\_, caulking entry points, and eliminating active nests.  
A. Active nests      D. Pheromone trails  
B. Ant infestations      E. None of the Above  
C. Nest galleries
3. Insecticide sprays and baits can be used to kill foraging ants and destroy nests, but strategies designed to prevent further infestations should be used in conjunction with chemical treatment.  
A. TRUE      B. FALSE
4. Which of the following terms are attached to the head; these organs detect chemicals, air currents, and vibrations; they also are used to transmit and receive signals through touch?  
A. Eyes      D. Wings  
B. Mesosoma ("thorax")      E. None of the Above  
C. Two antennae ("feelers")
5. Both the \_\_\_\_\_ of the ant are attached to the mesosoma ("thorax"). The legs terminate in a hooked claw which allows them to hook on and climb surfaces.  
A. Reproductive structures      D. Arms and wings  
B. Legs and wings      E. None of the Above  
C. Arms and legs

6. Queens shed their wings after the nuptial flight, leaving visible stubs, a distinguishing feature of queens. In a few species, \_\_\_\_\_ and males occur.
- A. Soldier(s)
  - B. Worker(s)
  - C. Alate
  - D. Wingless queens (ergatoids)
  - E. None of the Above

### **Metasoma**

7. The metasoma (the "abdomen") of the ant contains important internal organs, including those of the reproductive, respiratory (tracheae), and \_\_\_\_\_.
- A. Egg-laying structures
  - B. Excretory systems
  - C. Stinger(s)
  - D. Wings
  - E. None of the Above

8. Workers of many species have their egg-laying structures modified into \_\_\_\_\_ that are used for subduing prey and defending their nests.
- A. Egg-laying structures
  - B. Excretory systems
  - C. Stinger(s)
  - D. Wings
  - E. None of the Above

### **IPM Control Program**

9. An Integrated Pest Management (IPM) approach offers a slight chance for control of ants. An IPM approach suggests but a few of control methods into a pest management program. IPM methods include chemical strategies.
- A. TRUE
  - B. FALSE

### **Carpenter Ants - 1 Node ant – Wood Destroyer**

10. Because carpenter ants keep the \_\_\_\_\_ very clean and push the sawdust and dead insect parts out small holes in the wood, a small, fresh pile of sawdust under the nest timber is the usual sign of an active carpenter ant nest.

- A. Active nests
- B. Wall voids
- C. Nest galleries
- D. Tunneled galleries
- E. None of the Above

11. Once a nest is found, treatment is usually easy with either an insecticide dust or spray. Which of the following terms into wall voids or the nest itself may be necessary to insure complete control?

- A. Insecticide dilutions
- B. Injection of insecticide
- C. Bait treatments
- D. Spray the product in a band
- E. None of the Above

12. To prevent further carpenter ant infestations, trim all trees and bushes so branches do not touch the house and correct \_\_\_\_\_ such as leaky roofs and plumbing.

- A. Active nests
- B. Wall voids
- C. Moisture problems
- D. Electrical outlets
- E. None of the Above

### **Indoors**

13. Nests are often concealed in wall voids, ceilings, subfloors, attics, or hollow doors. It is usually necessary for a professional pest control applicator to drill small (about 1/8 inch) holes and apply an insecticidal dust into the nest area. It is best to determine the nest's location as specifically as possible.

- A. TRUE
- B. FALSE

14. If it is difficult to locate the nest, a(n) \_\_\_\_\_ can be applied into wall voids through electrical outlets.
- A. Insecticide dilutions
  - B. Insecticidal dust
  - C. Bait treatments
  - D. Spray the product in a band
  - E. None of the Above

**Perimeter Insecticide Treatments**

15. The most commonly used method for controlling carpenter ants is treating the perimeter of a home with a \_\_\_\_\_.
- A. Insecticide dilution
  - B. Dust or spray
  - C. Bait treatment
  - D. Spray product
  - E. None of the Above

**Please complete all the topics before submitting the answer key.**

**Topic 2 - 2 Node Ant Identification and Control Section**

1. Most retail products are \_\_\_\_\_ containing hydramethylnon, sulfluramid, abamectin, or boric acid.
- A. Insecticide dilutions
  - B. Dust or spray
  - C. Bait treatments
  - D. Liquid or granular formulations
  - E. None of the Above
2. Which of the following missing terms and insecticides can be used to control ants in the outside nest?
- A. Insecticide dilutions
  - B. Cellose
  - C. Bait treatments
  - D. Product in a band
  - E. None of the Above
3. Which of the following missing terms can be used outside to successfully drench ant nests? Be sure to follow label recommendations for correct procedures when applying the insecticide.
- A. Insecticide dilutions
  - B. Dust or spray
  - C. Bait treatments
  - D. Spray the product in a band
  - E. None of the Above
4. When possible, remove wood that contains carpenter ant nests, or destroy the colony. When this is not practical, and carpenter ants have been discovered entering your home from outdoor nests, a treatment with a \_\_\_\_\_ around the building's exterior helps keep them out of your home.
- A. Insecticide dilutions
  - B. Residual insecticide
  - C. Bait treatments
  - D. Non-residual insecticide
  - E. None of the Above
5. Which of the following missing terms, covering the foundation and under the lower edge of the siding to help keep ants from coming inside?
- A. Insecticide dilutions
  - B. Dust
  - C. Bait treatments
  - D. Spray the product in a band
  - E. None of the Above

6. Chemical Control. Ants can be controlled with baits, crack and crevice treatments, indoor space and surface treatments, outdoor barrier and broadcast treatments, as well as void and attic treatments.

A. TRUE      B. FALSE

7. Since ants do not rely on trophallaxis (reciprocal feeding), the bait toxicant cannot be thoroughly distributed to the members of the colony, including the queen and brood.

A. TRUE      B. FALSE

8. Quick-kill insecticides and baits will only kill the foraging ants, not allowing the foraging ants to take the bait back home to feed the queen, nest workers and brood.

A. TRUE      B. FALSE

### **Key**

9. The key to using baits is excess. Applied properly and using a fresh bait product, a broadcast application will give 50% to 60% control, rarely 70%.

A. TRUE      B. FALSE

### **Carpenter Ant Infestations**

10. To prevent further carpenter ant infestations, trim all trees and bushes so branches do not touch the house and correct moisture problems such as leaky roofs and plumbing. Paint and/or seal exposed wood construction before it becomes wet.

A. TRUE      B. FALSE

### **Signs and Symptoms of Pesticide Poisoning**

#### **Recognizing Signs and Symptoms of Poisoning**

11. Anyone who may become exposed to pesticides should be aware of the signs and symptoms of pesticide poisoning.

A. TRUE      B. FALSE

12. Prompt action during pesticide overexposure will not prevent serious consequences. Poisoning signs cannot be seen by others, for example, vomiting, sweating, or pin-point pupils.

A. TRUE      B. FALSE

#### **Severe Symptoms**

13. In a pesticide emergency, identify the pesticide to which the victim was exposed. Provide this information to medical authorities.

A. TRUE      B. FALSE

14. Some of these poisoning symptoms may feel like a cold, flu, or heat exhaustion. Some people may have an allergic reaction to plants, fertilizers, or other chemicals used in agriculture. It is best to see a doctor if any of these symptoms are present.

A. TRUE      B. FALSE

15. Recognize the signs and symptoms of pesticide poisoning for those pesticides you commonly use or to which you may be exposed. If you suspect a pesticide poisoning, get immediate help from a local hospital, physician, or the nearest poison control center.

A. TRUE      B. FALSE



## Topic 3 – Termite Section

15 Final Questions

### Answer key in front.

Identify the following pictures.

1. This is \_\_\_\_\_?

- A. Soldier
- B. Worker
- C. Swarmer
- D. Queen
- E. None of the Above

2. This is \_\_\_\_\_?

- A. Soldier
- B. Worker
- C. Swarmer
- D. Queen
- E. None of the Above

3. This is \_\_\_\_\_?

- A. Soldier
- B. Worker
- C. Swarmer
- D. Queen
- E. None of the Above

4. This is \_\_\_\_\_?

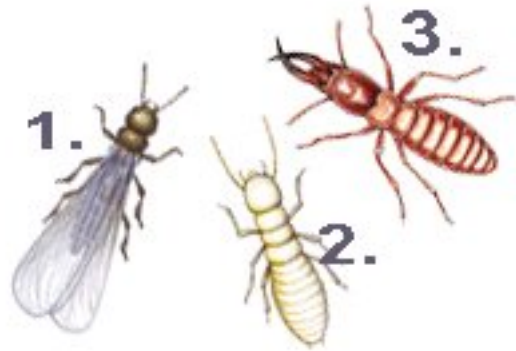
- A. Soldier
- B. Worker
- C. Swarmer
- D. Queen
- E. None of the Above

5. The colony may be up to 18-20 feet deep in the ground. The ground serves as a protection against \_\_\_\_\_ and provides a moisture reservoir.

- A. Treatments
- B. Ants
- C. Enemies
- D. Extreme temperatures
- E. None of the Above

6. Termites reach wood or this missing term above ground by constructing and traveling through earthen (mud) tubes?

- A. Nest
- B. Cellulose materials
- C. Mud
- D. Wood of a structure
- E. None of the Above



7. Which of the following is native to most forest areas where it performs the important task of breaking down the large quantities of dead and fallen trees and other sources of cellulose that continuously accumulate in the forests.

- A. Formosan termite(s)
- B. Desert subterranean termite(s)
- C. Drywood termite(s)
- D. Western subterranean termite(s) or Subterranean
- E. None of the Above

8. Which of the following termites are responsible for guarding the colony and its occupants? Termites continually groom each other to obtain certain secretions. These secretions help regulate the number of individuals in the various castes.

- A. Soldier(s)
- B. Worker(s)
- C. Reproductive(s)
- D. Nymph(s)
- E. None of the Above

9. Which of the following travel in these mud shelter tubes as protection from predators, sunburn, dehydration and to maintain a high humidity environment which is essential for their survival?

- A. Formosan termite(s)
- B. Desert subterranean termite(s)
- C. Drywood termite(s)
- D. Western subterranean termite(s) or Subterranean
- E. None of the Above

10. Which of the following do not need a connection to soil and there is no soil in their feeding galleries? They do not build mud tunnels; they construct large, irregular galleries that run across and with the wood grain, with a very smooth, clean, and sandpaper-like appearance.

- A. Formosan termite(s)
- B. Desert subterranean termite(s)
- C. Drywood termite(s)
- D. Western subterranean termite(s) or Subterranean
- E. None of the Above

11. Which of the following are highly secretive, preferring to enter a building through areas inaccessible to inspection, such as, through in-fill patios, fire heaths, expansion joints and cracks in concrete slab (on-ground) flooring?

- A. Formosan termite(s)
- B. Desert subterranean termite(s)
- C. Pacific Dampwood termite(s)
- D. Western subterranean termite(s) or Subterranean
- E. None of the Above

12. Which of the following can pass through a 1/8" crack or an expansion joint (eating through the rubber compound) between adjoining concrete on ground flooring.

- A. Formosan termite(s)
- B. Desert subterranean termite(s)
- C. Pacific Dampwood termite(s)
- D. Western subterranean termite(s) or Subterranean
- E. None of the Above

13. Which of the following can also travel under timber parquetry and other floor tiles to get to the wall framing timbers in a building?

- A. Formosan termite(s)
- B. Desert subterranean termite(s)
- C. Pacific Dampwood termite(s)
- D. Western subterranean termite(s) or Subterranean
- E. None of the Above

14. Which of the following have acute survival instincts? If they are shaken up or disturbed, the termites often will abandon the associated area and move on to secretly cause damage in other areas in the building.

- A. Formosan termite(s)
- B. Desert subterranean termite(s)
- C. Drywood termite(s)
- D. Western subterranean termite(s) or Subterranean
- E. None of the Above

15. Which of the following are almost an inch long that is quite a bit larger than the Subterranean or the Drywood variety.

- A. Formosan termite(s)
- B. Desert subterranean termite(s)
- C. Dampwood termite(s)
- D. Western subterranean termite(s) or Subterranean
- E. None of the Above

## Topic 4 – Ant and Termite Management

1. At low levels, however, \_\_\_\_\_ is only minimally toxic, and perhaps beneficial, to humans, other mammals, and growing plants.

- A. Termidor®
- B. Fipronil
- C. Permethrin
- D. Boron
- E. None of the Above

2. Use of \_\_\_\_\_-treated wood for construction of homes and their wood-based contents appears to offer many advantages to today's environmentally sensitive world.

- A. Termidor®
- B. Fipronil
- C. Permethrin
- D. Borate
- E. None of the Above

3. Which of the following terms is the only termiticide from the pyrrole family of chemistry and is active primarily as a stomach poison with some contact activity. It is also non-repellent to termites?

- A. Termidor®
- B. Fipronil
- C. Permethrin
- D. Chlorfenapyr
- E. None of the Above

4. Fipronil is the only insecticide in this new class, introduced in 1990 and registered in the U.S. in 1996. It is marketed as a termiticide under the tradename \_\_\_\_\_. This termiticide is a non-repellent material with contact and stomach activity.

- A. Termidor®
- B. Fipronil
- C. Permethrin
- D. Chlorfenapyr
- E. None of the Above

5. Which of the following terms works by blocking the gamma-aminobutyric acid (GABA) regulated chloride channel in neurons, thus disrupting the activity of the insect's central nervous system.

- A. Boron
- B. Fipronil
- C. Permethrin
- D. Chlorfenapyr
- E. None of the Above

### Termite Product Applications

6. Drilling may be required along the foundation walls, along one side of partition walls, along both sides of \_\_\_\_\_, around sewer pipes, floor drains, conduits, and any crack in the basement floor.

- A. Insecticide barrier
- B. Load-bearing wall
- C. Crawl space area
- D. Interior vertical barrier
- E. None of the Above

7. Using a sub-slab injector, inject the insecticide at the rate of 4 gallons per 10 linear feet. For an insecticide barrier around the \_\_\_\_\_, apply an insecticide by rodding and/or trenching.

- A. Exterior of foundation walls
- B. Continuous chemical barrier
- C. Crawl space area
- D. Interior vertical barrier
- E. None of the Above

8. The rod holes should be spaced 1 to 1 1/2 feet apart to provide a \_\_\_\_\_. If a trench is necessary, it should not be wider than 6 inches. Inject insecticide using rodding technique at the rate of 4 gallons per 10 linear feet. Cover the trench with untreated soil.

- A. Insecticide barrier
- B. Continuous chemical barrier
- C. Crawl space area
- D. Interior vertical barrier
- E. None of the Above

### Crawl Spaces

9. Establish \_\_\_\_\_ by rodding and/or trenching procedures. A shallow trench should not be wider than 6 inches. Space rod holes about 1 to 1 1/2 feet apart.

- A. Insecticide barrier(s)
- B. Continuous chemical barrier(s)
- C. Crawl space area(s)
- D. Vertical barrier(s)
- E. None of the Above

10. Apply insecticide at the rate of 4 gallons per 10 linear feet per foot of depth. Do not treat soil in \_\_\_\_\_ with a broadcast insecticide spray.

- A. Insecticide barrier
- B. Continuous chemical barrier
- C. Crawl space area
- D. Interior vertical barrier
- E. None of the Above

11. Treat through masonry voids to provide a \_\_\_\_\_ at the top of the footing.

- A. Insecticide barrier
- B. Continuous chemical barrier
- C. Treatment
- D. Spray barrier
- E. None of the Above

12. When \_\_\_\_\_ is necessary, access holes must be drilled through mortar joints below the sill plate, as close as possible to the footing. Apply insecticide at the rate of 2 gallons per 10 linear feet. Plug all holes with mortar or any other special compound.

- A. Insecticide barrier
- B. Continuous chemical barrier
- C. Treatment
- D. Interior vertical barrier
- E. None of the Above

13. Control products containing inorganic borate can be applied to lumber at the time of construction, or later if exposed, to provide lifetime protection from \_\_\_\_\_ as long as the wood remains dry.

- A. Infestation
- B. Chemical barrier
- C. Contamination
- D. Complete termite treatment
- E. None of the Above

14. State regulations require pest control operators to remove termite tubes as part of a \_\_\_\_\_.

- A. Termite infestation
- B. Continuous chemical barrier
- C. Lifetime protection
- D. Complete termite treatment
- E. None of the Above

15. Removing the tubes provides a way to determine if a \_\_\_\_\_ remains active after treatment or if the termites reappear in the same area later.

- A. Termite infestation
- B. Continuous chemical barrier
- C. Lifetime protection
- D. Complete termite treatment
- E. None of the Above

## Topic 5- Advanced Ant and Termite Management Section

Identify the pesticide trade name with the common name.

1. Ficam

- A. Cypermethrin
- B. Bendiocarb
- C. Chlorpyrifos
- D. Permethrin
- E. None of the Above

2. Equity

- A. Cypermethrin
- B. Bendiocarb
- C. Chlorpyrifos
- D. Permethrin
- E. None of the Above

### Fumigation Application

3. Application methods differ depending upon (i) the fumigant formulation being used, (ii) site/area being treated and (iii) the weather.

- A. TRUE
- B. FALSE

4. When liquid phosphine (liquefied gas or liquefied gas under pressure) is used as a fumigant, it is introduced into the treated site in five gallon buckets where it disperses as a gas for quick distribution throughout the fumigated area.

- A. TRUE
- B. FALSE

### Adjacent Enclosed Area

5. If people or domestic animals may enter into this area during the fumigation or aeration process, you are required to conduct monitoring to be sure no one is exposed above the permitted level of 30 ppm on an 8-hour time weighted average.

- A. TRUE
- B. FALSE

### **Fumigation Management Plan**

6. A Fumigation Management Plan (FMP) is a written description of the steps designed to plan for a safe, legal and effective fumigation.

A. TRUE      B. FALSE

7. Most fumigation activities are carried out by a certified applicator or by a handyman under the direct supervision of a certified applicator.

A. TRUE      B. FALSE

### **Monitoring for Safety**

8. Monitoring for safety is always suggested unless it can be confirmed/concluded by the certified applicator that there is slight possibility of exposure to phosphine at or above the allowable limits to workers or bystanders.

A. TRUE      B. FALSE

9. Monitoring may be done if there is even the slightest possibility of non-exposure. Exposures to phosphine must not exceed the 8-hour Time Weighted Average of 0.3 ppm or the 15-minute Short-Term Exposure Limit (STEL) of 1.0 ppm.

A. TRUE      B. FALSE

### **Termite Control Methods Summary**

10. All termite control methods can be categorized as either whole structure or localized. A whole-structure treatment is defined as the simultaneous treatment of all infestations, accessible and inaccessible, in a structure.

A. TRUE      B. FALSE

11. Localized or spot treatment is more restrictive and is often applied to a single board or small group of boards.

A. TRUE      B. FALSE

12. Whole-structure treatments have an advantage over localized treatments in that they should eliminate all infestations, even hidden ones. With the uncertainty of current detection methods, particularly when drywall or other wall coverings conceal infestations, there is always some doubt as to the extent of drywood termite colony boundaries and the number of colonies within homes.

A. TRUE      B. FALSE

13. Sulfuryl fluoride kills drywood termites within several months. A monitored fumigation, which involves installing gas monitoring lines inside the structure undergoing treatment, has the lowest rate of treatment success.

A. TRUE      B. FALSE

14. There are many localized treatment methods available that include both chemical and nonchemical options. For liquid and dust insecticides to be effective, termites must make contact with them or ingest them.

A. TRUE      B. FALSE

15. The benefit of using a repellent product instead of a bait product is that repellents can be used both inside and outside the home. If a termite gets past the barriers to entry (the liquid repellent), the termite will encounter the repellent that makes the environment inhospitable.

A. TRUE      B. FALSE

## Ant Control CEU Training Awareness Assignment #3

### Last Names Q-R

You will have 90 days from the start of this course to have successfully passed this assignment with a score of 70 %. You may e mail the answers to TLC, info@tlch2o.com or fax the answers to TLC, (928) 272-0747. This assignment is available to you in a Word Format on TLC's Website. Once you have paid the course fee, you will be provided complete course support from Student Services (928) 468-0665.

#### Write your answers on the Answer Key found in the front of this assignment.

1. We will require all students to fax or e-mail a copy of their driver's license with the registration form.
2. You will need to pick one of the following four assignments to complete. This selection process is based upon your last name.
3. If your last name begins with an A to G, you will pick assignment number 1, if your last name begins with the letter H to P, you are to complete assignment number 2 and if your last name begins with the letter Q-R, you will pick assignment number 3, and if your last name begins with the letter S-Z, you will pick assignment number 4.
4. If you are a repeat student, you will need to complete assignment number 5.

### Topic 1 - 1 Node Ant Identification and Control Section

1. Ants are beneficial organisms in the balance of nature. In nature, ants greatly reduce the amount of dead and decaying plant and animal organic matter. They also aerate the soil with their nests.  
A. TRUE      B. FALSE
2. Ants can be controlled with a combination of good sanitation, removing \_\_\_\_\_, caulking entry points, and eliminating active nests.  
A. Active nests      D. Pheromone trails  
B. Ant infestations      E. None of the Above  
C. Nest galleries
3. Insecticide sprays and baits can be used to kill foraging ants and destroy nests, but strategies designed to prevent further infestations should be used in conjunction with chemical treatment.  
A. TRUE      B. FALSE
4. Ant infestations are not easy to control and different strategies should be used depending on \_\_\_\_\_ of the ants.  
A. Active nests      D. Nest location and food preferences  
B. Ant infestations      E. None of the Above  
C. Nest galleries
5. The head has two strong jaws, the mandibles, used to carry food, manipulate objects, construct nests, and for defense. In some species, a small pocket (\_\_\_\_\_) inside the mouth stores food, so it may be passed to other ants or their larvae.  
A. Storage structures      D. Infrabuccal chamber  
B. Mesosoma ("thorax")      E. None of the Above  
C. Throat

6. Both the \_\_\_\_\_ of the ant are attached to the mesosoma ("thorax"). The legs terminate in a hooked claw which allows them to hook on and climb surfaces.

- A. Reproductive structures
- B. Legs and wings
- C. Arms and legs
- D. Arms and wings
- E. None of the Above

7. Workers of many species have their egg-laying structures modified into \_\_\_\_\_ that are used for subduing prey and defending their nests.

- A. Egg-laying structures
- B. Excretory systems
- C. Stinger(s)
- D. Wings
- E. None of the Above

### **Carpenter Ants - 1 Node ant – Wood Destroyer**

8. Carpenter ants are large (about 3/8" to 1/2" long) and black or red. Carpenter ants are usually smaller than most other house- infesting ants. They vary in color from a dull black or reddish yellow color to a combination of black and dull red or reddish-orange. Soldier ants range in size from 5/16 to 7/16 inches long.

- A. TRUE
- B. FALSE

9. Treatment options include use of a \_\_\_\_\_ applied as a dust or spray to the nest.

- A. Insecticide dilutions
- B. Dust or spray
- C. Bait treatments
- D. Bait or residual contact insecticide
- E. None of the Above

10. Carpenter ants are least active in the evening hours, foraging for all kinds of food, outside. By following the ants, you will never be able to tell where the nest is.

- A. TRUE
- B. FALSE

11. Carpenter ants tunnel into wood to form nest galleries. If they go unnoticed for several years, they may cause structural damage. Outdoors, the ants use dead trees or tree limbs, stumps, logs or areas under stones as nesting sites.

- A. TRUE
- B. FALSE

12. Because carpenter ants keep the \_\_\_\_\_ very clean and push the sawdust and dead insect parts out small holes in the wood, a small, fresh pile of sawdust under the nest timber is the usual sign of an active carpenter ant nest.

- A. Active nests
- B. Wall voids
- C. Nest galleries
- D. Tunneled galleries
- E. None of the Above

13. To prevent further carpenter ant infestations, trim all trees and bushes so branches do not touch the house and correct \_\_\_\_\_ such as leaky roofs and plumbing.

- A. Active nests
- B. Wall voids
- C. Moisture problems
- D. Electrical outlets
- E. None of the Above

14. If it is difficult to locate the nest, a(n) \_\_\_\_\_ can be applied into wall voids through electrical outlets.

- A. Insecticide dilutions
- B. Insecticidal dust
- C. Bait treatments
- D. Spray the product in a band
- E. None of the Above



15. Nests are often concealed in wall voids, ceilings, subfloors, attics, or hollow doors. It is usually necessary for a professional pest control applicator to drill small (about 1/8 inch) holes and apply an insecticidal dust into the nest area. It is best to determine the nest's location as specifically as possible.

- A. TRUE      B. FALSE

**Please complete all the topic section before submitting your answer key.**

## **Topic 2 - 2 Node Ant Identification and Control Section**

1. Most retail products are \_\_\_\_\_ containing hydramethylnon, sulfluramid, abamectin, or boric acid.

- A. Insecticide dilutions      D. Liquid or granular formulations  
B. Dust or spray              E. None of the Above  
C. Bait treatments

2. Which of the following missing terms and insecticides can be used to control ants in the outside nest?

- A. Insecticide dilutions      D. Product in a band  
B. Cellose                      E. None of the Above  
C. Bait treatments

3. Which of the following missing terms can be used outside to successfully drench ant nests? Be sure to follow label recommendations for correct procedures when applying the insecticide.

- A. Insecticide dilutions      D. Spray the product in a band  
B. Dust or spray              E. None of the Above  
C. Bait treatments

4. Often carpenter ant nests found indoors are satellite nests that can be traced back to a parent colony outdoors in trees, stumps, roots, fence posts, landscape timbers, and other wood structures.

- A. TRUE      B. FALSE

5. Which of the following missing terms, covering the foundation and under the lower edge of the siding to help keep ants from coming inside?

- A. Insecticide dilutions      D. Spray the product in a band  
B. Dust                          E. None of the Above  
C. Bait treatments

6. When possible, remove wood that contains carpenter ant nests, or destroy the colony. When this is not practical, and carpenter ants have been discovered entering your home from outdoor nests, a treatment with a \_\_\_\_\_ around the building's exterior helps keep them out of your home.

- A. Insecticide dilutions      D. Non-residual insecticide  
B. Residual insecticide      E. None of the Above  
C. Bait treatments

### **Pesticide Treatments General Applications**

7. Chemical Control. Ants can be controlled with baits, crack and crevice treatments, indoor space and surface treatments, outdoor barrier and broadcast treatments, as well as void and attic treatments.

A. TRUE      B. FALSE

8. Since ants do not rely on trophallaxis (reciprocal feeding), the bait toxicant cannot be thoroughly distributed to the members of the colony, including the queen and brood.

A. TRUE      B. FALSE

9. Quick-kill insecticides and baits will only kill the foraging ants, not allowing the foraging ants to take the bait back home to feed the queen, nest workers and brood.

A. TRUE      B. FALSE

10. The key to using baits is excess. Applied properly and using a fresh bait product, a broadcast application will give 50% to 60% control, rarely 70%.

A. TRUE      B. FALSE

### **Nest Treatments**

11. Unless you can treat the nest directly, spraying is an effective solution for small ants, never use a non-repellent insecticides or "undetectable" liquid treatments such as Dominion 2L, Termidor or Phantom. Phantom liquid of aerosol is labeled for the inside.

A. TRUE      B. FALSE

### **Carpenter Ant Infestations**

12. To prevent further carpenter ant infestations, trim all trees and bushes so branches do not touch the house and correct moisture problems such as leaky roofs and plumbing. Paint and/or seal exposed wood construction before it becomes wet.

A. TRUE      B. FALSE

### **Signs and Symptoms of Pesticide Poisoning**

#### **Recognizing Signs and Symptoms of Poisoning**

13. Anyone who may become exposed to pesticides should be aware of the signs and symptoms of pesticide poisoning.

A. TRUE      B. FALSE

14. Prompt action during pesticide overexposure will not prevent serious consequences. Poisoning signs cannot be seen by others, for example, vomiting, sweating, or pin-point pupils.

A. TRUE      B. FALSE

15. Recognize the signs and symptoms of pesticide poisoning for those pesticides you commonly use or to which you may be exposed. If you suspect a pesticide poisoning, get immediate help from a local hospital, physician, or the nearest poison control center.

A. TRUE      B. FALSE

## Topic 3 – Termite Section

15 Final Questions

### Feeding Habits

1. Termites feed mainly on wood and wood products containing \_\_\_\_\_.  
A. Moisture                      D. Wood  
B. Cellulose(s)                E. None of the Above  
C. Mud
2. Termites have special protozoa (microorganisms) in their intestine that provide enzymes to digest \_\_\_\_\_.  
A. Moisture                      D. Wood  
B. Cellulose(s)                E. None of the Above  
C. Mud

### Below Ground Termite Colonies

3. The colony may be up to 18-20 feet deep in the ground. The ground serves as a protection against \_\_\_\_\_ and provides a moisture reservoir.  
A. Treatments                D. Extreme temperatures  
B. Ants                         E. None of the Above  
C. Enemies
4. Termites reach wood or this missing term above ground by constructing and traveling through earthen (mud) tubes?  
A. Nest                         D. Wood of a structure  
B. Cellulose materials        E. None of the Above  
C. Mud

### Above Ground Termite Colonies

5. Which of the following do not need a connection to soil and there is no soil in their feeding galleries? They do not build mud tunnels; they construct large, irregular galleries that run across and with the wood grain, with a very smooth, clean, and sandpaper-like appearance.  
A. Drywood termites                      D. Western subterranean termite(s)  
B. Desert subterranean termite(s)    E. None of the Above  
C. Pacific Dampwood termite(s)
6. Which of the following termites are responsible for guarding the colony and its occupants? Termites continually groom each other to obtain certain secretions. These secretions help regulate the number of individuals in the various castes.  
A. Soldier(s)                      D. Nymph(s)  
B. Worker(s)                      E. None of the Above  
C. Reproductive(s)
7. Which of the following travel in these mud shelter tubes as protection from predators, sunburn, dehydration and to maintain a high humidity environment which is essential for their survival?  
A. Formosan termite(s)                      D. Western subterranean termite(s) or Subterranean  
B. Desert subterranean termite(s)    E. None of the Above  
C. Drywood termite(s)

8. Which of the following do not need a connection to soil and there is no soil in their feeding galleries? They do not build mud tunnels; they construct large, irregular galleries that run across and with the wood grain, with a very smooth, clean, and sandpaper-like appearance.
- A. Formosan termite(s)                      D. Western subterranean termite(s) or Subterranean  
 B. Desert subterranean termite(s)      E. None of the Above  
 C. Drywood termite(s)
9. Which of the following are highly secretive, preferring to enter a building through areas inaccessible to inspection, such as, through in-fill patios, fire heaths, expansion joints and cracks in concrete slab (on-ground) flooring?
- A. Formosan termite(s)                      D. Western subterranean termite(s) or Subterranean  
 B. Desert subterranean termite(s)      E. None of the Above  
 C. Pacific Dampwood termite(s)
10. Which of the following can pass through a 1/8" crack or an expansion joint (eating through the rubber compound) between adjoining concrete on ground flooring.
- A. Formosan termite(s)                      D. Western subterranean termite(s) or Subterranean  
 B. Desert subterranean termite(s)      E. None of the Above  
 C. Pacific Dampwood termite(s)
11. Which of the following can also travel under timber parquetry and other floor tiles to get to the wall framing timbers in a building?
- A. Formosan termite(s)                      D. Western subterranean termite(s) or Subterranean  
 B. Desert subterranean termite(s)      E. None of the Above  
 C. Pacific Dampwood termite(s)
12. Which of the following have acute survival instincts? If they are shaken up or disturbed, the termites often will abandon the associated area and move on to secretly cause damage in other areas in the building.
- A. Formosan termite(s)                      D. Western subterranean termite(s) or Subterranean  
 B. Desert subterranean termite(s)      E. None of the Above  
 C. Drywood termite(s)
13. Which of the following have three primary castes: nymphs, reproductives and soldiers. The reproductive, also known as alates, are often up to ¾-inches long and have dark-brown wings and dark-brown bodies? Nymphs are cream colored and soldiers have brownish-colored heads with very large mouthparts that are used to help defend the colony from predators.
- A. Formosan termite(s)                      D. Nevada Drywood termite(s)  
 B. Desert subterranean termite(s)      E. None of the Above  
 C. Pacific Dampwood termite(s)
14. Which of the following are found in Arizona, New Mexico, Texas, and Southern California. Living where the habitat is dry and arid in these regions of the United States. They ingest damp wood that is buried in the ground. Munching termites attack tree roots, bushes, doorframes and fence posts. The Dampwood also feeds on live trees – wood that is under ground level.
- A. Formosan termite(s)                      D. Western subterranean termite(s) or Subterranean  
 B. Desert subterranean termite(s)      E. None of the Above  
 C. Desert Dampwood termite(s)

15. Which of the following are almost an inch long that is quite a bit larger than the Subterranean or the Drywood variety.
- A. Formosan termite(s)                      D. Western subterranean termite(s) or Subterranean  
 B. Desert subterranean termite(s)      E. None of the Above  
 C. Dampwood termite(s)

## Topic 4 – Ant and Termite Management

1. Though the mechanisms of toxicity are not fully understood, \_\_\_\_\_ is very toxic to insects and decay fungi that commonly damage wood in structures.

- A. Boron                      D. Chlorfenapyr  
 B. Fipronil                  E. None of the Above  
 C. Permethrin

2. Which of the following terms is registered as a termiticide under the tradename Phantom®.

- A. Termidor®                D. Chlorfenapyr  
 B. Fipronil                  E. None of the Above  
 C. Permethrin

3. Which of the following terms acts on the mitochondria of cells and uncouples or inhibits oxidative phosphorylation, preventing the formation of the crucial energy molecule adenosine triphosphate (ATP)? As a result, energy production in the cells shuts down, resulting in cellular and, ultimately, termite death.

- A. Termidor®                D. Chlorfenapyr  
 B. Fipronil                  E. None of the Above  
 C. Permethrin

4. Fipronil is the only insecticide in this new class, introduced in 1990 and registered in the U.S. in 1996. It is marketed as a termiticide under the tradename \_\_\_\_\_. This termiticide is a non-repellent material with contact and stomach activity.

- A. Termidor®                D. Chlorfenapyr  
 B. Fipronil                  E. None of the Above  
 C. Permethrin

5. Which of the following terms works by blocking the gamma-aminobutyric acid (GABA) regulated chloride channel in neurons, thus disrupting the activity of the insect's central nervous system.

- A. Boron                      D. Chlorfenapyr  
 B. Fipronil                  E. None of the Above  
 C. Permethrin

### Termite Product Applications

#### Building With a Basement and Crawl Space

6. Basement: For a(n) \_\_\_\_\_, drill the floor slab and space holes about one foot apart.

- A. Insecticide barrier                      D. Interior vertical barrier  
 B. Continuous chemical barrier        E. None of the Above  
 C. Crawl space area

7. Drilling may be required along the foundation walls, along one side of partition walls, along both sides of \_\_\_\_\_, around sewer pipes, floor drains, conduits, and any crack in the basement floor.

- A. Insecticide barrier
- B. Load-bearing wall
- C. Crawl space area
- D. Interior vertical barrier
- E. None of the Above

8. Using a sub-slab injector, inject the insecticide at the rate of 4 gallons per 10 linear feet. For an insecticide barrier around the \_\_\_\_\_, apply an insecticide by rodding and/or trenching.

- A. Exterior of foundation walls
- B. Continuous chemical barrier
- C. Crawl space area
- D. Interior vertical barrier
- E. None of the Above

9. The rod holes should be spaced 1 to 1 1/2 feet apart to provide a \_\_\_\_\_. If a trench is necessary, it should not be wider than 6 inches. Inject insecticide using rodding technique at the rate of 4 gallons per 10 linear feet. Cover the trench with untreated soil.

- A. Insecticide barrier
- B. Continuous chemical barrier
- C. Crawl space area
- D. Interior vertical barrier
- E. None of the Above

### **Crawl Spaces**

10. Establish \_\_\_\_\_ by rodding and/or trenching procedures. A shallow trench should not be wider than 6 inches. Space rod holes about 1 to 1 1/2 feet apart.

- A. Insecticide barrier(s)
- B. Continuous chemical barrier(s)
- C. Crawl space area(s)
- D. Vertical barrier(s)
- E. None of the Above

11. Apply insecticide at the rate of 4 gallons per 10 linear feet per foot of depth. Do not treat soil in \_\_\_\_\_ with a broadcast insecticide spray.

- A. Insecticide barrier
- B. Continuous chemical barrier
- C. Crawl space area
- D. Interior vertical barrier
- E. None of the Above

12. Treat through masonry voids to provide a \_\_\_\_\_ at the top of the footing.

- A. Insecticide barrier
- B. Continuous chemical barrier
- C. Treatment
- D. Spray barrier
- E. None of the Above

13. When \_\_\_\_\_ is necessary, access holes must be drilled through mortar joints below the sill plate, as close as possible to the footing. Apply insecticide at the rate of 2 gallons per 10 linear feet. Plug all holes with mortar or any other special compound.

- A. Insecticide barrier
- B. Continuous chemical barrier
- C. Treatment
- D. Interior vertical barrier
- E. None of the Above

14. Removing the tubes provides a way to determine if a \_\_\_\_\_ remains active after treatment or if the termites reappear in the same area later.

- A. Termite infestation
- B. Continuous chemical barrier
- C. Lifetime protection
- D. Complete termite treatment
- E. None of the Above

15. Control products containing inorganic borate can be applied to lumber at the time of construction, or later if exposed, to provide lifetime protection from \_\_\_\_\_ as long as the wood remains dry.
- A. Infestation                      D. Complete termite treatment  
B. Chemical barrier      E. None of the Above  
C. Contamination

## **Topic 5- Advanced Ant and Termite Management Section**

### **Adjacent Enclosed Area**

1. If people or domestic animals may enter into this area during the fumigation or aeration process, you are required to conduct monitoring to be sure no one is exposed above the permitted level of 30 ppm on an 8-hour time weighted average.
- A. TRUE      B. FALSE

### **Fumigation Management Plan**

2. A Fumigation Management Plan (FMP) is a written description of the steps designed to plan for a safe, legal and effective fumigation.
- A. TRUE      B. FALSE
3. A new FMP is needed for every fumigation of an individual facility if conditions will vary other than general updates such as temperature and humidity recordings. The FMP and related documentation, including monitoring records, must be maintained for a minimum of 2 months.
- A. TRUE      B. FALSE
4. Before proceeding with a fumigation, the client and/or certified applicator does not need to consult with the State lead pesticide regulatory agency to determine regulatory status, requirements, and restrictions for use of fumigants in that state.
- A. TRUE      B. FALSE

### **Monitoring for Safety**

5. Monitoring for safety is always suggested unless it can be confirmed/concluded by the certified applicator that there is slight possibility of exposure to phosphine at or above the allowable limits to workers or bystanders.
- A. TRUE      B. FALSE
6. Monitoring may be done if there is even the slightest possibility of non-exposure. Exposures to phosphine must not exceed the 8-hour Time Weighted Average of 0.3 ppm or the 15-minute Short-Term Exposure Limit (STEL) of 1.0 ppm.
- A. TRUE      B. FALSE

### **Termite Control Methods Summary**

7. All termite control methods can be categorized as either whole structure or localized. A whole-structure treatment is defined as the simultaneous treatment of all infestations, accessible and inaccessible, in a structure.
- A. TRUE      B. FALSE
8. Localized or spot treatment is more restrictive and is often applied to a single board or small group of boards.
- A. TRUE      B. FALSE

9. Whole-structure treatments have an advantage over localized treatments in that they should eliminate all infestations, even hidden ones. With the uncertainty of current detection methods, particularly when drywall or other wall coverings conceal infestations, there is always some doubt as to the extent of drywood termite colony boundaries and the number of colonies within homes.

A. TRUE      B. FALSE

### **Whole-Structure Treatment or Fumigation**

10. Sulfuryl fluoride treats all infestations simultaneously and has low levels of efficacy, if correctly applied.

A. TRUE      B. FALSE

11. Sulfuryl fluoride kills drywood termites within several months. A monitored fumigation, which involves installing gas monitoring lines inside the structure undergoing treatment, has the lowest rate of treatment success.

A. TRUE      B. FALSE

12. Non-monitored fumigation may not have enough gas concentration to kill infestations, and failures may occur.

A. TRUE      B. FALSE

### **Heat**

13. Heat is a nonchemical option for whole-structure treatment. The treatment process involves heating all wood in the structure to a minimum of 220°F and holding this temperature for at least 33 minutes.

A. TRUE      B. FALSE

### **Localized Treatments**

14. There are many localized treatment methods available that include both chemical and nonchemical options. For liquid and dust insecticides to be effective, termites must make contact with them or ingest them.

A. TRUE      B. FALSE

### **Liquid Application with Repellent**

15. The benefit of using a repellent product instead of a bait product is that repellents can be used both inside and outside the home. If a termite gets past the barriers to entry (the liquid repellent), the termite will encounter the repellent that makes the environment inhospitable.

A. TRUE      B. FALSE



## Ant Control CEU Training Awareness Assignment #4 Last Names S-Z

You will have 90 days from the start of this course to have successfully passed this assignment with a score of 70 %. You may e mail the answers to TLC, info@tlch2o.com or fax the answers to TLC, (928) 272-0747. This assignment is available to you in a Word Format on TLC's Website. Once you have paid the course fee, you will be provided complete course support from Student Services (928) 468-0665.

### Write your answers on the Answer Key found in the front of this assignment.

1. We will require all students to fax or e-mail a copy of their driver's license with the registration form.
2. You will need to pick one of the following four assignments to complete. This selection process is based upon your last name.
3. If your last name begins with an A to G, you will pick assignment number 1, if your last name begins with the letter H to P, you are to complete assignment number 2 and if your last name begins with the letter Q-R, you will pick assignment number 3, and if your last name begins with the letter S-Z, you will pick assignment number 4.
4. If you are a return student, you will need to complete assignment number 5 in the rear.

### Topic 1 - 1 Node Ant Identification and Control Section

1. Insecticide sprays and baits can be used to kill foraging ants and destroy nests, but strategies designed to prevent further infestations should be used in conjunction with chemical treatment.  
A. TRUE      B. FALSE
2. Ants are beneficial organisms in the balance of nature. In nature, ants greatly reduce the amount of dead and decaying plant and animal organic matter. They also aerate the soil with their nests.  
A. TRUE      B. FALSE
3. Ant infestations are not easy to control and different strategies should be used depending on \_\_\_\_\_ of the ants.  
A. Active nests      D. Nest location and food preferences  
B. Ant infestations      E. None of the Above  
C. Nest galleries
4. Ants can be controlled with a combination of good sanitation, removing \_\_\_\_\_, caulking entry points, and eliminating active nests.  
A. Active nests      D. Pheromone trails  
B. Ant infestations      E. None of the Above  
C. Nest galleries
5. The head has two strong jaws, the mandibles, used to carry food, manipulate objects, construct nests, and for defense. In some species, a small pocket (\_\_\_\_\_) inside the mouth stores food, so it may be passed to other ants or their larvae.  
A. Storage structures      D. Infrabuccal chamber  
B. Mesosoma ("thorax")      E. None of the Above  
C. Throat

### **Mesosoma**

6. Both the \_\_\_\_\_ of the ant are attached to the mesosoma ("thorax"). The legs terminate in a hooked claw which allows them to hook on and climb surfaces.

- A. Reproductive structures
- B. Legs and wings
- C. Arms and legs
- D. Arms and wings
- E. None of the Above

7. The metasoma (the "abdomen") of the ant contains important internal organs, including those of the reproductive, respiratory (tracheae), and \_\_\_\_\_.

- A. Egg-laying structures
- B. Excretory systems
- C. Stinger(s)
- D. Wings
- E. None of the Above

### **IPM Control Program**

8. An Integrated Pest Management (IPM) approach offers a slight chance for control of ants. An IPM approach suggests but a few of control methods into a pest management program. IPM methods include chemical strategies.

- A. TRUE
- B. FALSE

### **Carpenter Ants - 1 Node ant – Wood Destroyer**

9. Carpenter ants tunnel into wood to form nest galleries. If they go unnoticed for several years, they may cause structural damage. Outdoors, the ants use dead trees or tree limbs, stumps, logs or areas under stones as nesting sites.

- A. TRUE
- B. FALSE

10. Carpenter ants are large (about 3/8" to 1/2" long) and black or red. Carpenter ants are usually smaller than most other house- infesting ants. They vary in color from a dull black or reddish yellow color to a combination of black and dull red or reddish-orange. Soldier ants range in size from 5/16 to 7/16 inches long.

- A. TRUE
- B. FALSE

11. Treatment options include use of a \_\_\_\_\_ applied as a dust or spray to the nest.

- A. Insecticide dilutions
- B. Dust or spray
- C. Bait treatments
- D. Bait or residual contact insecticide
- E. None of the Above

12. Read and follow the product label for best results. It may be necessary to drill small holes in the wall voids, baseboards, and window and doorsills to reach the nest or major part of the colony. Nests can also be removed and infested wood replaced, if feasible.

- A. TRUE
- B. FALSE

13. Carpenter ants are least active in the evening hours, foraging for all kinds of food, outside. By following the ants, you will never be able to tell where the nest is.

- A. TRUE
- B. FALSE

14. If it is difficult to locate the nest, a(n) \_\_\_\_\_ can be applied into wall voids through electrical outlets.

- A. Insecticide dilutions
- B. Insecticidal dust
- C. Bait treatments
- D. Spray the product in a band
- E. None of the Above

### Perimeter Insecticide Treatments

15. The most commonly used method for controlling carpenter ants is treating the perimeter of a home with a \_\_\_\_\_.
- A. Insecticide dilution
  - B. Dust or spray
  - C. Bait treatment
  - D. Spray product
  - E. None of the Above

**Please complete all the topic sections before submitting the answer key.**

## Topic 2 - 2 Node Ant Identification and Control Section

### Ant Bait Treatments

1. Which of the following missing terms and insecticides can be used to control ants in the outside nest?
- A. Insecticide dilutions
  - B. Cellose
  - C. Bait treatments
  - D. Product in a band
  - E. None of the Above
2. Which of the following missing terms can be used outside to successfully drench ant nests? Be sure to follow label recommendations for correct procedures when applying the insecticide.
- A. Insecticide dilutions
  - B. Dust or spray
  - C. Bait treatments
  - D. Spray the product in a band
  - E. None of the Above
3. Most retail products are \_\_\_\_\_ containing hydramethylnon, sulfluramid, abamectin, or boric acid.
- A. Insecticide dilutions
  - B. Dust or spray
  - C. Bait treatments
  - D. Liquid or granular formulations
  - E. None of the Above

### Outdoors

4. Often carpenter ant nests found indoors are satellite nests that can be traced back to a parent colony outdoors in trees, stumps, roots, fence posts, landscape timbers, and other wood structures.
- A. TRUE
  - B. FALSE
5. When possible, remove wood that contains carpenter ant nests, or destroy the colony. When this is not practical, and carpenter ants have been discovered entering your home from outdoor nests, a treatment with a \_\_\_\_\_ around the building's exterior helps keep them out of your home.
- A. Insecticide dilutions
  - B. Residual insecticide
  - C. Bait treatments
  - D. Non-residual insecticide
  - E. None of the Above
6. Which of the following missing terms, covering the foundation and under the lower edge of the siding to help keep ants from coming inside?
- A. Insecticide dilutions
  - B. Dust
  - C. Bait treatments
  - D. Spray the product in a band
  - E. None of the Above

### **Pesticide Treatments General Applications**

7. Quick-kill insecticides and baits will only kill the foraging ants, not allowing the foraging ants to take the bait back home to feed the queen, nest workers and brood.

A. TRUE      B. FALSE

8. The key to using baits is excess. Applied properly and using a fresh bait product, a broadcast application will give 50% to 60% control, rarely 70%.

A. TRUE      B. FALSE

9. Unless you can treat the nest directly, spraying is an effective solution for small ants, never use a non-repellent insecticides or "undetectable" liquid treatments such as Dominion 2L, Termidor or Phantom. Phantom liquid or aerosol is labeled for the inside.

A. TRUE      B. FALSE

10. To prevent further carpenter ant infestations, trim all trees and bushes so branches do not touch the house and correct moisture problems such as leaky roofs and plumbing. Paint and/or seal exposed wood construction before it becomes wet.

A. TRUE      B. FALSE

### **Signs and Symptoms of Pesticide Poisoning**

#### **Recognizing Signs and Symptoms of Poisoning**

11. Anyone who may become exposed to pesticides should be aware of the signs and symptoms of pesticide poisoning.

A. TRUE      B. FALSE

12. Prompt action during pesticide overexposure will not prevent serious consequences. Poisoning signs cannot be seen by others, for example, vomiting, sweating, or pin-point pupils.

A. TRUE      B. FALSE

#### **Severe Symptoms**

13. Recognize the signs and symptoms of pesticide poisoning for those pesticides you commonly use or to which you may be exposed. If you suspect a pesticide poisoning, get immediate help from a local hospital, physician, or the nearest poison control center.

A. TRUE      B. FALSE

14. Some of these poisoning symptoms may feel like a cold, flu, or heat exhaustion. Some people may have an allergic reaction to plants, fertilizers, or other chemicals used in agriculture. It is best to see a doctor if any of these symptoms are present.

A. TRUE      B. FALSE

15. In a pesticide emergency, identify the pesticide to which the victim was exposed. Provide this information to medical authorities.

A. TRUE      B. FALSE

## Topic 3 – Termite Section

15 Final Questions

### Below Ground Termite Colonies

1. The colony may be up to 18-20 feet deep in the ground. The ground serves as a protection against \_\_\_\_\_ and provides a moisture reservoir.

- A. Treatments
- B. Ants
- C. Enemies
- D. Extreme temperatures
- E. None of the Above

2. Termites reach wood or this missing term above ground by constructing and traveling through earthen (mud) tubes?

- A. Nest
- B. Cellulose materials
- C. Mud
- D. Wood of a structure
- E. None of the Above

### Above Ground Termite Colonies

3. Which of the following do not need a connection to soil and there is no soil in their feeding galleries? They do not build mud tunnels; they construct large, irregular galleries that run across and with the wood grain, with a very smooth, clean, and sandpaper-like appearance.

- A. Drywood termites
- B. Desert subterranean termite(s)
- C. Pacific Dampwood termite(s)
- D. Western subterranean termite(s)
- E. None of the Above

### Workers

4. The first broods of newly hatched nymphs (young termites) generally develop into \_\_\_\_\_.

- A. Soldier(s)
- B. Worker(s)
- C. Alate
- D. Nymph(s)
- E. None of the Above

5. Full-grown workers are soft-bodied, wingless, blind, and creamy white. In early stages, they are fed predigested food by the?

- A. Soldier(s)
- B. Worker(s)
- C. Alate
- D. King and queen
- E. None of the Above

6. Which of the following matures within a year and live from 3 to 5 years?

- A. Soldier(s)
- B. Worker(s)
- C. Alate
- D. Nymph(s)
- E. None of the Above

7. Which of the following must be fed by workers as they are incapable of feeding themselves?

- A. Soldier(s)
- B. Worker(s)
- C. Alate
- D. Nymph(s)
- E. None of the Above

8. Which of the following are less numerous than workers and their sole function is to defend the colony against invaders such as ants?
- A. Soldier(s)
  - B. Worker(s)
  - C. Alate
  - D. Nymph(s)
  - E. None of the Above

**Termite Identification Section**

9. Which of the following termites are responsible for guarding the colony and its occupants? Termites continually groom each other to obtain certain secretions. These secretions help regulate the number of individuals in the various castes.

- A. Soldier(s)
- B. Worker(s)
- C. Reproductive(s)
- D. Nymph(s)
- E. None of the Above

10. Which of the following travel in these mud shelter tubes as protection from predators, sunburn, dehydration and to maintain a high humidity environment which is essential for their survival?

- A. Formosan termite(s)
- B. Desert subterranean termite(s)
- C. Drywood termite(s)
- D. Western subterranean termite(s) or Subterranean
- E. None of the Above

11. Which of the following do not need a connection to soil and there is no soil in their feeding galleries? They do not build mud tunnels; they construct large, irregular galleries that run across and with the wood grain, with a very smooth, clean, and sandpaper-like appearance.

- A. Formosan termite(s)
- B. Desert subterranean termite(s)
- C. Drywood termite(s)
- D. Western subterranean termite(s) or Subterranean
- E. None of the Above

12. Which of the following are highly secretive, preferring to enter a building through areas inaccessible to inspection, such as, through in-fill patios, fire heaths, expansion joints and cracks in concrete slab (on-ground) flooring?

- A. Formosan termite(s)
- B. Desert subterranean termite(s)
- C. Pacific Dampwood termite(s)
- D. Western subterranean termite(s) or Subterranean
- E. None of the Above

13. Which of the following can pass through a 1/8" crack or an expansion joint (eating through the rubber compound) between adjoining concrete on ground flooring.

- A. Formosan termite(s)
- B. Desert subterranean termite(s)
- C. Pacific Dampwood termite(s)
- D. Western subterranean termite(s) or Subterranean
- E. None of the Above

14. Which of the following can also travel under timber parquetry and other floor tiles to get to the wall framing timbers in a building?

- A. Formosan termite(s)
- B. Desert subterranean termite(s)
- C. Pacific Dampwood termite(s)
- D. Western subterranean termite(s) or Subterranean
- E. None of the Above

15. Which of the following have acute survival instincts? If they are shaken up or disturbed, the termites often will abandon the associated area and move on to secretly cause damage in other areas in the building.

- A. Formosan termite(s)
- B. Desert subterranean termite(s)
- C. Drywood termite(s)
- D. Western subterranean termite(s) or Subterranean
- E. None of the Above

## Topic 4 – Ant and Termite Management

1. Which of the following terms is registered as a termiticide under the tradename Phantom®.

- A. Termidor®
- B. Fipronil
- C. Permethrin
- D. Chlorfenapyr
- E. None of the Above

2. Which of the following terms acts on the mitochondria of cells and uncouples or inhibits oxidative phosphorylation, preventing the formation of the crucial energy molecule adenosine triphosphate (ATP)? As a result, energy production in the cells shuts down, resulting in cellular and, ultimately, termite death.

- A. Termidor®
- B. Fipronil
- C. Permethrin
- D. Chlorfenapyr
- E. None of the Above

3. Fipronil is the only insecticide in this new class, introduced in 1990 and registered in the U.S. in 1996. It is marketed as a termiticide under the tradename \_\_\_\_\_. This termiticide is a non-repellent material with contact and stomach activity.

- A. Termidor®
- B. Fipronil
- C. Permethrin
- D. Chlorfenapyr
- E. None of the Above

4. Which of the following terms works by blocking the gamma-aminobutyric acid (GABA) regulated chloride channel in neurons, thus disrupting the activity of the insect's central nervous system.

- A. Boron
- B. Fipronil
- C. Permethrin
- D. Chlorfenapyr
- E. None of the Above

### Termite Product Applications

5. Basement: For a(n) \_\_\_\_\_, drill the floor slab and space holes about one foot apart.

- A. Insecticide barrier
- B. Continuous chemical barrier
- C. Crawl space area
- D. Interior vertical barrier
- E. None of the Above

6. Drilling may be required along the foundation walls, along one side of partition walls, along both sides of \_\_\_\_\_, around sewer pipes, floor drains, conduits, and any crack in the basement floor.

- A. Insecticide barrier
- B. Load-bearing wall
- C. Crawl space area
- D. Interior vertical barrier
- E. None of the Above

7. Using a sub-slab injector, inject the insecticide at the rate of 4 gallons per 10 linear feet. For an insecticide barrier around the \_\_\_\_\_, apply an insecticide by rodding and/or trenching.

- A. Exterior of foundation walls
- B. Continuous chemical barrier
- C. Crawl space area
- D. Interior vertical barrier
- E. None of the Above

8. The rod holes should be spaced 1 to 1 1/2 feet apart to provide a \_\_\_\_\_. If a trench is necessary, it should not be wider than 6 inches. Inject insecticide using rodding technique at the rate of 4 gallons per 10 linear feet. Cover the trench with untreated soil.

- A. Insecticide barrier
- B. Continuous chemical barrier
- C. Crawl space area
- D. Interior vertical barrier
- E. None of the Above

### **Crawl Spaces**

9. Establish \_\_\_\_\_ by rodding and/or trenching procedures. A shallow trench should not be wider than 6 inches. Space rod holes about 1 to 1 1/2 feet apart.

- A. Insecticide barrier(s)
- B. Continuous chemical barrier(s)
- C. Crawl space area(s)
- D. Vertical barrier(s)
- E. None of the Above

10. Apply insecticide at the rate of 4 gallons per 10 linear feet per foot of depth. Do not treat soil in \_\_\_\_\_ with a broadcast insecticide spray.

- A. Insecticide barrier
- B. Continuous chemical barrier
- C. Crawl space area
- D. Interior vertical barrier
- E. None of the Above

### **Hollow Masonry Units of the Foundation Walls**

11. Treat through masonry voids to provide a \_\_\_\_\_ at the top of the footing.

- A. Insecticide barrier
- B. Continuous chemical barrier
- C. Treatment
- D. Spray barrier
- E. None of the Above

12. When \_\_\_\_\_ is necessary, access holes must be drilled through mortar joints below the sill plate, as close as possible to the footing. Apply insecticide at the rate of 2 gallons per 10 linear feet. Plug all holes with mortar or any other special compound.

- A. Insecticide barrier
- B. Continuous chemical barrier
- C. Treatment
- D. Interior vertical barrier
- E. None of the Above

13. State regulations require pest control operators to remove termite tubes as part of a \_\_\_\_\_.

- A. Termite infestation
- B. Continuous chemical barrier
- C. Lifetime protection
- D. Complete termite treatment
- E. None of the Above

14. Removing the tubes provides a way to determine if a \_\_\_\_\_ remains active after treatment or if the termites reappear in the same area later.

- A. Termite infestation
- B. Continuous chemical barrier
- C. Lifetime protection
- D. Complete termite treatment
- E. None of the Above



15. Control products containing inorganic borate can be applied to lumber at the time of construction, or later if exposed, to provide lifetime protection from \_\_\_\_\_ as long as the wood remains dry.

- A. Infestation
- B. Chemical barrier
- C. Contamination
- D. Complete termite treatment
- E. None of the Above

## Topic 5- Advanced Ant and Termite Management Section

**Identify the pesticide trade name with the common name.**

1. Dagnet FT

- A. Cypermethrin
- B. Bendiocarb
- C. Chlorpyrifos
- D. Permethrin
- E. None of the Above

2. Prevail FT

- A. Cypermethrin
- B. Bendiocarb
- C. Chlorpyrifos
- D. Permethrin
- E. None of the Above

3. Pyrfon 6

- A. Cypermethrin
- B. Bendiocarb
- C. Chlorpyrifos
- D. Isofenphos
- E. None of the Above

4. Torpedo

- A. Cypermethrin
- B. Bendiocarb
- C. Chlorpyrifos
- D. Permethrin
- E. None of the Above

### Fumigation Application

5. Application methods differ depending upon (i) the fumigant formulation being used, (ii) site/area being treated and (iii) the weather.

- A. TRUE
- B. FALSE

### Adjacent Enclosed Area

6. If people or domestic animals may enter into this area during the fumigation or aeration process, you are required to conduct monitoring to be sure no one is exposed above the permitted level of 30 ppm on an 8-hour time weighted average.

- A. TRUE
- B. FALSE

### Fumigation Management Plan

7. A Fumigation Management Plan (FMP) is a written description of the steps designed to plan for a safe, legal and effective fumigation.

- A. TRUE
- B. FALSE

8. Before proceeding with a fumigation, the client and/or certified applicator does not need to consult with the State lead pesticide regulatory agency to determine regulatory status, requirements, and restrictions for use of fumigants in that state.

- A. TRUE
- B. FALSE

9. Most fumigation activities are carried out by a certified applicator or by a handyman under the direct supervision of a certified applicator.

A. TRUE      B. FALSE

### **Monitoring for Safety**

10. Monitoring for safety is always suggested unless it can be confirmed/concluded by the certified applicator that there is slight possibility of exposure to phosphine at or above the allowable limits to workers or bystanders.

A. TRUE      B. FALSE

### **Whole-Structure Treatment or Fumigation**

11. Sulfuryl fluoride treats all infestations simultaneously and has low levels of efficacy, if correctly applied.

A. TRUE      B. FALSE

12. Sulfuryl fluoride kills drywood termites within several months. A monitored fumigation, which involves installing gas monitoring lines inside the structure undergoing treatment, has the lowest rate of treatment success.

A. TRUE      B. FALSE

### **Heat**

13. Heat is a nonchemical option for whole-structure treatment. The treatment process involves heating all wood in the structure to a minimum of 220°F and holding this temperature for at least 33 minutes.

A. TRUE      B. FALSE

### **Localized Treatments**

14. There are many localized treatment methods available that include both chemical and nonchemical options. For liquid and dust insecticides to be effective, termites must make contact with them or ingest them.

A. TRUE      B. FALSE

### **Liquid Application with Repellent**

15. The benefit of using a repellent product instead of a bait product is that repellents can be used both inside and outside the home. If a termite gets past the barriers to entry (the liquid repellent), the termite will encounter the repellent that makes the environment inhospitable.

A. TRUE      B. FALSE

## Ant Control CEU Training Awareness Assignment #5 Repeat Students

You will have 90 days from the start of this course to have successfully passed this assignment with a score of 70 %. You may e mail the answers to TLC, info@tlch2o.com or fax the answers to TLC, (928) 272-0747. This assignment is available to you in a Word Format on TLC's Website. Once you have paid the course fee, you will be provided complete course support from Student Services (928) 468-0665.

### Write your answers on the Answer Key found in the front of this assignment.

1. We will require all students to fax or e-mail a copy of their driver's license with the registration form.
2. You will need to pick one of the following four assignments to complete. This selection process is based upon your last name.
3. If your last name begins with an A to G, you will pick assignment number 1, if your last name begins with the letter H to P, you are to complete assignment number 2 and if your last name begins with the letter Q-R, you will pick assignment number 3, and if your last name begins with the letter S-Z, you will pick assignment number 4.

### Topic 1 - 1 Node Ant Identification and Control Section

1. Insecticide sprays and baits can be used to kill foraging ants and destroy nests, but strategies designed to prevent further infestations should be used in conjunction with chemical treatment.  
A. TRUE      B. FALSE
2. Ants are beneficial organisms in the balance of nature. In nature, ants greatly reduce the amount of dead and decaying plant and animal organic matter. They also aerate the soil with their nests.  
A. TRUE      B. FALSE
3. Ant infestations are not easy to control and different strategies should be used depending on \_\_\_\_\_ of the ants.  
A. Active nests      D. Nest location and food preferences  
B. Ant infestations      E. None of the Above  
C. Nest galleries
4. Ants can be controlled with a combination of good sanitation, removing \_\_\_\_\_, caulking entry points, and eliminating active nests.  
A. Active nests      D. Pheromone trails  
B. Ant infestations      E. None of the Above  
C. Nest galleries
5. Which of the following terms are attached to the head; these organs detect chemicals, air currents, and vibrations; they also are used to transmit and receive signals through touch?  
A. Eyes      D. Wings  
B. Mesosoma ("thorax")      E. None of the Above  
C. Two antennae ("feelers")

6. Queens shed their wings after the nuptial flight, leaving visible stubs, a distinguishing feature of queens. In a few species, \_\_\_\_\_ and males occur.
- A. Soldier(s)                      D. Wingless queens (ergatoids)  
 B. Worker(s)                      E. None of the Above  
 C. Alate
7. Both the \_\_\_\_\_ of the ant are attached to the mesosoma ("thorax"). The legs terminate in a hooked claw which allows them to hook on and climb surfaces.
- A. Reproductive structures      D. Arms and wings  
 B. Legs and wings                E. None of the Above  
 C. Arms and legs
8. Only reproductive ants, queens, and males, have \_\_\_\_\_.
- A. Stingers                         D. Wings  
 B. Extra set of legs               E. None of the Above  
 C. Communication
9. The metasoma (the "abdomen") of the ant contains important internal organs, including those of the reproductive, respiratory (tracheae), and \_\_\_\_\_.
- A. Egg-laying structures        D. Wings  
 B. Excretory systems            E. None of the Above  
 C. Stinger(s)
10. Workers of many species have their egg-laying structures modified into \_\_\_\_\_ that are used for subduing prey and defending their nests.
- A. Egg-laying structures        D. Wings  
 B. Excretory systems            E. None of the Above  
 C. Stinger(s)
11. An Integrated Pest Management (IPM) approach offers a slight chance for control of ants. An IPM approach suggests but a few of control methods into a pest management program. IPM methods include chemical strategies.
- A. TRUE      B. FALSE
12. Carpenter ants are large (about 3/8" to 1/2" long) and black or red. Carpenter ants are usually smaller than most other house- infesting ants. They vary in color from a dull black or reddish yellow color to a combination of black and dull red or reddish-orange. Soldier ants range in size from 5/16 to 7/16 inches long.
- A. TRUE      B. FALSE
13. Carpenter ants tunnel into wood to form nest galleries. If they go unnoticed for several years, they may cause structural damage. Outdoors, the ants use dead trees or tree limbs, stumps, logs or areas under stones as nesting sites.
- A. TRUE      B. FALSE
14. Read and follow the product label for best results. It may be necessary to drill small holes in the wall voids, baseboards, and window and doorsills to reach the nest or major part of the colony. Nests can also be removed and infested wood replaced, if feasible.
- A. TRUE      B. FALSE

15. The most commonly used method for controlling carpenter ants is treating the perimeter of a home with a \_\_\_\_\_.
- A. Insecticide dilution
  - B. Dust or spray
  - C. Bait treatment
  - D. Spray product
  - E. None of the Above

**Please complete all the topic sections before submitting the answer key.**

## **Topic 2 - 2 Node Ant Identification and Control Section**

1. Most retail products are \_\_\_\_\_ containing hydramethylnon, sulfluramid, abamectin, or boric acid.
- A. Insecticide dilutions
  - B. Dust or spray
  - C. Bait treatments
  - D. Liquid or granular formulations
  - E. None of the Above
2. Which of the following missing terms and insecticides can be used to control ants in the outside nest?
- A. Insecticide dilutions
  - B. Cellose
  - C. Bait treatments
  - D. Product in a band
  - E. None of the Above
3. Which of the following missing terms can be used outside to successfully drench ant nests? Be sure to follow label recommendations for correct procedures when applying the insecticide.
- A. Insecticide dilutions
  - B. Dust or spray
  - C. Bait treatments
  - D. Spray the product in a band
  - E. None of the Above
4. Which of the following missing terms, covering the foundation and under the lower edge of the siding to help keep ants from coming inside?
- A. Insecticide dilutions
  - B. Dust
  - C. Bait treatments
  - D. Spray the product in a band
  - E. None of the Above
5. Often carpenter ant nests found indoors are satellite nests that can be traced back to a parent colony outdoors in trees, stumps, roots, fence posts, landscape timbers, and other wood structures.
- A. TRUE
  - B. FALSE
6. When possible, remove wood that contains carpenter ant nests, or destroy the colony. When this is not practical, and carpenter ants have been discovered entering your home from outdoor nests, a treatment with a \_\_\_\_\_ around the building's exterior helps keep them out of your home.
- A. Insecticide dilutions
  - B. Residual insecticide
  - C. Bait treatments
  - D. Non-residual insecticide
  - E. None of the Above

7. Quick-kill insecticides and baits will only kill the foraging ants, not allowing the foraging ants to take the bait back home to feed the queen, nest workers and brood.

A. TRUE      B. FALSE

8. Chemical Control. Ants can be controlled with baits, crack and crevice treatments, indoor space and surface treatments, outdoor barrier and broadcast treatments, as well as void and attic treatments.

A. TRUE      B. FALSE

9. Since ants do not rely on trophallaxis (reciprocal feeding), the bait toxicant cannot be thoroughly distributed to the members of the colony, including the queen and brood.

A. TRUE      B. FALSE

10. The key to using baits is excess. Applied properly and using a fresh bait product, a broadcast application will give 50% to 60% control, rarely 70%.

A. TRUE      B. FALSE

11. Unless you can treat the nest directly, spraying is an effective solution for small ants, never use a non-repellent insecticides or "undetectable" liquid treatments such as Dominion 2L, Termidor or Phantom. Phantom liquid or aerosol is labeled for the inside.

A. TRUE      B. FALSE

### **Carpenter Ant Infestations**

12. To prevent further carpenter ant infestations, trim all trees and bushes so branches do not touch the house and correct moisture problems such as leaky roofs and plumbing. Paint and/or seal exposed wood construction before it becomes wet.

A. TRUE      B. FALSE

### **Signs and Symptoms of Pesticide Poisoning**

#### **Recognizing Signs and Symptoms of Poisoning**

13. Anyone who may become exposed to pesticides should be aware of the signs and symptoms of pesticide poisoning.

A. TRUE      B. FALSE

14. Prompt action during pesticide overexposure will not prevent serious consequences. Poisoning signs cannot be seen by others, for example, vomiting, sweating, or pin-point pupils.

A. TRUE      B. FALSE

15. In a pesticide emergency, identify the pesticide to which the victim was exposed. Provide this information to medical authorities.

A. TRUE      B. FALSE

## Topic 3 – Termite Section

### 15 Final Questions

1. Which of the following emergence is stimulated when temperature and moisture conditions are favorable, usually on warm days following rainfall? Swarming typically occurs during daytime in the spring (March, April, and May), but swarms can occur indoors during other months.  
A. Soldier(s)                      D. Nymph(s)  
B. Worker(s)                      E. None of the Above  
C. Alate(s)
2. Which of the following is native to most forest areas where it performs the important task of breaking down the large quantities of dead and fallen trees and other sources of cellulose that continuously accumulate in the forests.  
A. Formosan termite(s)                      D. Western subterranean termite(s) or Subterranean  
B. Desert subterranean termite(s)      E. None of the Above  
C. Drywood termite(s)
3. Which of the following termites are ¼ inch (6 mm) long and pale cream in color (worker ants are yellow, red, brown or black)?  
A. Soldier(s)                      D. Nymph(s)  
B. Worker(s)                      E. None of the Above  
C. Reproductive(s)
4. Which of the following will tap their heads against the wood when disturbed which is another means of detecting the presence of termites?  
A. Soldier(s)                      D. Nymph(s)  
B. Worker(s)                      E. None of the Above  
C. Reproductive(s)
5. Which of the following construct the distinctive shelter tubes and collect food to feed the young and other members of the colony?  
A. Soldier(s)                      D. Nymph(s)  
B. Worker(s)                      E. None of the Above  
C. Reproductive(s)
6. Which of the following termites are responsible for guarding the colony and its occupants? Termites continually groom each other to obtain certain secretions. These secretions help regulate the number of individuals in the various castes.  
A. Soldier(s)                      D. Nymph(s)  
B. Worker(s)                      E. None of the Above  
C. Reproductive(s)
7. Which of the following are highly secretive, preferring to enter a building through areas inaccessible to inspection, such as, through in-fill patios, fire heaths, expansion joints and cracks in concrete slab (on-ground) flooring?  
A. Formosan termite(s)                      D. Western subterranean termite(s) or Subterranean  
B. Desert subterranean termite(s)      E. None of the Above  
C. Pacific Dampwood termite(s)

8. Which of the following can pass through a 1/8" crack or an expansion joint (eating through the rubber compound) between adjoining concrete on ground flooring.

- A. Formosan termite(s)
- B. Desert subterranean termite(s)
- C. Pacific Dampwood termite(s)
- D. Western subterranean termite(s) or Subterranean
- E. None of the Above

9. Which of the following can also travel under timber parquetry and other floor tiles to get to the wall framing timbers in a building?

- A. Formosan termite(s)
- B. Desert subterranean termite(s)
- C. Pacific Dampwood termite(s)
- D. Western subterranean termite(s) or Subterranean
- E. None of the Above

10. Which of the following travel in these mud shelter tubes as protection from predators, sunburn, dehydration and to maintain a high humidity environment which is essential for their survival?

- A. Formosan termite(s)
- B. Desert subterranean termite(s)
- C. Drywood termite(s)
- D. Western subterranean termite(s) or Subterranean
- E. None of the Above

11. Which of the following do not need a connection to soil and there is no soil in their feeding galleries? They do not build mud tunnels; they construct large, irregular galleries that run across and with the wood grain, with a very smooth, clean, and sandpaper-like appearance.

- A. Formosan termite(s)
- B. Desert subterranean termite(s)
- C. Drywood termite(s)
- D. Western subterranean termite(s) or Subterranean
- E. None of the Above

12. Which of the following have acute survival instincts? If they are shaken up or disturbed, the termites often will abandon the associated area and move on to secretly cause damage in other areas in the building.

- A. Formosan termite(s)
- B. Desert subterranean termite(s)
- C. Drywood termite(s)
- D. Western subterranean termite(s) or Subterranean
- E. None of the Above

13. Which of the following have three primary castes: nymphs, reproductives and soldiers. The reproductive, also known as alates, are often up to 3/4-inches long and have dark-brown wings and dark-brown bodies? Nymphs are cream colored and soldiers have brownish-colored heads with very large mouthparts that are used to help defend the colony from predators.

- A. Formosan termite(s)
- B. Desert subterranean termite(s)
- C. Pacific Dampwood termite(s)
- D. Nevada Drywood termite(s)
- E. None of the Above

14. Which of the following are found in Arizona, New Mexico, Texas, and Southern California. Living where the habitat is dry and arid in these regions of the United States. They ingest damp wood that is buried in the ground. Munching termites attack tree roots, bushes, doorframes and fence posts. The Dampwood also feeds on live trees – wood that is under ground level.

- A. Formosan termite(s)
- B. Desert subterranean termite(s)
- C. Desert Dampwood termite(s)
- D. Western subterranean termite(s) or Subterranean
- E. None of the Above



15. Which of the following are almost an inch long that is quite a bit larger than the Subterranean or the Drywood variety.
- A. Formosan termite(s)                      D. Western subterranean termite(s) or Subterranean  
 B. Desert subterranean termite(s)      E. None of the Above  
 C. Dampwood termite(s)

## Topic 4 – Ant and Termite Management

1. Use of \_\_\_\_\_-treated wood for construction of homes and their wood-based contents appears to offer many advantages to today's environmentally sensitive world.

- A. Termidor®                      D. Borate  
 B. Fipronil                        E. None of the Above  
 C. Permethrin

2. Which of the following terms is the only termiticide from the pyrrole family of chemistry and is active primarily as a stomach poison with some contact activity. It is also non-repellent to termites?

- A. Termidor®                      D. Chlorfenapyr  
 B. Fipronil                        E. None of the Above  
 C. Permethrin

3. Which of the following terms is registered as a termiticide under the tradename Phantom®.

- A. Termidor®                      D. Chlorfenapyr  
 B. Fipronil                        E. None of the Above  
 C. Permethrin

4. The pyrethroids are a large family of modern synthetic insecticides similar to the naturally derived \_\_\_\_\_.

- A. Botanical pyrethrins            D. Chlorfenapyr  
 B. Fipronil                        E. None of the Above  
 C. Permethrin

5. Which of the following is a broad-spectrum pyrethroid insecticide. It is available in dusts, emulsifiable concentrates, smokes, ULV concentrates, and wettable-powder formulations?

- A. Termidor®                      D. Chlorfenapyr  
 B. Fipronil                        E. None of the Above  
 C. Permethrin

6. Though the mechanisms of toxicity are not fully understood, \_\_\_\_\_ is very toxic to insects and decay fungi that commonly damage wood in structures.

- A. Boron                            D. Chlorfenapyr  
 B. Fipronil                        E. None of the Above  
 C. Permethrin

7. Drilling may be required along the foundation walls, along one side of partition walls, along both sides of \_\_\_\_\_, around sewer pipes, floor drains, conduits, and any crack in the basement floor.

- A. Insecticide barrier            D. Interior vertical barrier  
 B. Load-bearing wall            E. None of the Above  
 C. Crawl space area

8. Using a sub-slab injector, inject the insecticide at the rate of 4 gallons per 10 linear feet. For an insecticide barrier around the \_\_\_\_\_, apply an insecticide by rodding and/or trenching.

- A. Exterior of foundation walls
- B. Continuous chemical barrier
- C. Crawl space area
- D. Interior vertical barrier
- E. None of the Above

9. The rod holes should be spaced 1 to 1 1/2 feet apart to provide a \_\_\_\_\_. If a trench is necessary, it should not be wider than 6 inches. Inject insecticide using rodding technique at the rate of 4 gallons per 10 linear feet. Cover the trench with untreated soil.

- A. Insecticide barrier
- B. Continuous chemical barrier
- C. Crawl space area
- D. Interior vertical barrier
- E. None of the Above

10. Establish \_\_\_\_\_ by rodding and/or trenching procedures. A shallow trench should not be wider than 6 inches. Space rod holes about 1 to 1 1/2 feet apart.

- A. Insecticide barrier(s)
- B. Continuous chemical barrier(s)
- C. Crawl space area(s)
- D. Vertical barrier(s)
- E. None of the Above

11. Apply insecticide at the rate of 4 gallons per 10 linear feet per foot of depth. Do not treat soil in \_\_\_\_\_ with a broadcast insecticide spray.

- A. Insecticide barrier
- B. Continuous chemical barrier
- C. Crawl space area
- D. Interior vertical barrier
- E. None of the Above

12. Treat through masonry voids to provide a \_\_\_\_\_ at the top of the footing.

- A. Insecticide barrier
- B. Continuous chemical barrier
- C. Treatment
- D. Spray barrier
- E. None of the Above

13. When \_\_\_\_\_ is necessary, access holes must be drilled through mortar joints below the sill plate, as close as possible to the footing. Apply insecticide at the rate of 2 gallons per 10 linear feet. Plug all holes with mortar or any other special compound.

- A. Insecticide barrier
- B. Continuous chemical barrier
- C. Treatment
- D. Interior vertical barrier
- E. None of the Above

14. State regulations require pest control operators to remove termite tubes as part of a \_\_\_\_\_.

- A. Termite infestation
- B. Continuous chemical barrier
- C. Lifetime protection
- D. Complete termite treatment
- E. None of the Above

15. Removing the tubes provides a way to determine if a \_\_\_\_\_ remains active after treatment or if the termites reappear in the same area later.

- A. Termite infestation
- B. Continuous chemical barrier
- C. Lifetime protection
- D. Complete termite treatment
- E. None of the Above

## Topic 5- Advanced Ant and Termite Management Section

1. Most fumigation activities are carried out by a certified applicator or by a handyman under the direct supervision of a certified applicator.

A. TRUE      B. FALSE

2. A new FMP is needed for every fumigation of an individual facility if conditions will vary other than general updates such as temperature and humidity recordings. The FMP and related documentation, including monitoring records, must be maintained for a minimum of 2 months.

A. TRUE      B. FALSE

3. Before proceeding with a fumigation, the client and/or certified applicator does not need to consult with the State lead pesticide regulatory agency to determine regulatory status, requirements, and restrictions for use of fumigants in that state.

A. TRUE      B. FALSE

4. Monitoring for safety is always suggested unless it can be confirmed/concluded by the certified applicator that there is slight possibility of exposure to phosphine at or above the allowable limits to workers or bystanders.

A. TRUE      B. FALSE

5. Monitoring may be done if there is even the slightest possibility of non-exposure. Exposures to phosphine must not exceed the 8-hour Time Weighted Average of 0.3 ppm or the 15-minute Short-Term Exposure Limit (STEL) of 1.0 ppm.

A. TRUE      B. FALSE

6. Whole-structure treatments have an advantage over localized treatments in that they should eliminate all infestations, even hidden ones. With the uncertainty of current detection methods, particularly when drywall or other wall coverings conceal infestations, there is always some doubt as to the extent of drywood termite colony boundaries and the number of colonies within homes.

A. TRUE      B. FALSE

7. All termite control methods can be categorized as either whole structure or localized. A whole-structure treatment is defined as the simultaneous treatment of all infestations, accessible and inaccessible, in a structure.

A. TRUE      B. FALSE

8. Localized or spot treatment is more restrictive and is often applied to a single board or small group of boards.

A. TRUE      B. FALSE

9. Sulfuryl fluoride treats all infestations simultaneously and has low levels of efficacy, if correctly applied.

A. TRUE      B. FALSE

10. Sulfuryl fluoride kills drywood termites within several months. A monitored fumigation, which involves installing gas monitoring lines inside the structure undergoing treatment, has the lowest rate of treatment success.

A. TRUE      B. FALSE

11. Non-monitored fumigation may not have enough gas concentration to kill infestations, and failures may occur.  
A. TRUE      B. FALSE
12. Heat is a nonchemical option for whole-structure treatment. The treatment process involves heating all wood in the structure to a minimum of 220°F and holding this temperature for at least 33 minutes.  
A. TRUE      B. FALSE
13. There are many localized treatment methods available that include both chemical and nonchemical options. For liquid and dust insecticides to be effective, termites must make contact with them or ingest them.  
A. TRUE      B. FALSE
14. This combination of methods involves using liquid pesticide in the same manner described above. However, instead of using bait as an additional form of termite prevention, this method combines the liquid pesticide application with an application of termite repellent.  
A. TRUE      B. FALSE
15. The benefit of using a repellent product instead of a bait product is that repellents can be used both inside and outside the home. If a termite gets past the barriers to entry (the liquid repellent), the termite will encounter the repellent that makes the environment inhospitable.  
A. TRUE      B. FALSE