Registration form

General Pest Control CEU Training $200.00

48 HOUR RUSH ORDER PROCESSING FEE ADDITIONAL $50.00

Rush service does not include overnight delivery or FedEx fees.

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 2-3. Signature is required.

Signature _____

Address: _____

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Phone:
Home (_____) _____ Work (_____)_____

Fax (_____) _____ Email_____

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Operator ID #_____Exp. Date_____

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 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

If you have paid on the Internet, please write your Customer#_____

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.

DISCLAIMER 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.

State Approval Listing Link, check to see if your State accepts or has pre-approved this course. Not all States are listed. Not all courses are listed. If the course is not accepted for CEU credit, we will give you the course free if you ask your State to accept it for credit.

State Approval Listing URL…

http://www.tlch2o.com/PDF/CEU%20State%20Approvals.pdf

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.

Thank you…

All downloads are electronically tracked and monitored for security purposes.

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 a 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

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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.

All downloads are electronically tracked and monitored for security purposes.

General Pest Control Answer Key

Name_____

Phone#_____

You are responsible to ensure that this course is accepted for credit by your State. 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.

Multiple Choice. Pick only one answer per question.
Circle or Mark, X, Underline or Bold the answer.

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You are finished with your assignment. Please fax this answer key and your registration page along with the customer survey to TLC. Fax Number (928) 272-0747

We will require a photocopy of your driver's license to verify your identity.

Always call us after faxing the paperwork to ensure that we've received it. If you need this course graded and your certificate sooner, add a $50.00 rush fee. This may not include postage charges. ***Thank you for your business.***

Amount of Time for Course Completion – How many hours you spent on course?

Must match State Hour Requirement _____ (Hours)

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

CUSTOMER SERVICE RESPONSE CARD

General Pest Control Training Course

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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General Pests CEU Training Awareness Assignment #1

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. You can find online assistance for this course on the in the Search function on Adobe Acrobat PDF to help find the answers.

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

Multiple Choice, please select one answer and mark it on the answer key. (s) means the answer is plural or singular.

Ant Section

1. All ants live in colonies, which consist of an _____ (queen), short-lived males, and workers (sterile females).
A. Egg-laying female
B. Fly to new locations
C. Depositing a chemical message
D. Trail pheromone
E. None of the Above

2. The ants you see foraging in your garden or kitchen are workers. Workers that find food communicate with other workers by depositing a _____ on the substrate as they crawl back to the nest.
A. Egg-laying female
B. Chemical message
C. Depositing a chemical message
D. Trail pheromone
E. None of the Above

3. Although we cannot smell it, _____this "chemical message" stick to the substrate for long periods of time and helps other ants find the food at the end of the trail.
A. Egg-laying female
B. Fly to new locations
C. Depositing a chemical message
D. Trail pheromone
E. None of the Above

4. In the spring, ants develop wings and chemical message and invade homes to forage for food _____or to establish a new nest.
A. Egg-laying female
B. Fly to new locations
C. Depositing a chemical message
D. Trail pheromone
E. None of the Above

5. Ants are a major annoyance to homeowners and are difficult to control. You should not _____ of good sanitation to eliminate food sources, although good sanitation may not control an ant infestation by itself.
A. Fondness for honeydew
B. Kill foraging ants and destroy nests
C. Underestimate the importance
D. Thin-waisted
E. None of the Above

6. Although we do not like sharing our homes with ants, they are beneficial organisms in the balance of nature. In nature, ants _____ of dead and decaying plant and animal organic matter. They also aerate the soil with their nests.
A. Greatly reduce the amount
B. Kill foraging ants and destroy nests
C. Combination of good sanitation
D. Thin-waisted
E. None of the Above

7. Many ant species have a _____ that aphids produce from feeding on plants. Large numbers of ants crawling on a plant may be a sign of serious aphid infestation.
A. Fondness for honeydew
B. Kill foraging ants and destroy nests
C. Combination of good sanitation
D. Thin-waisted
E. None of the Above

8. Ant infestations are _____ should be used depending on nest location and food preferences of the ants.
A. Fondness for honeydew
B. Kill foraging ants and destroy nests
C. Combination of good sanitation
D. Not easy to control and different strategies
E. None of the Above

9. Ants can be controlled with a _____, removing pheromone trails, caulking entry points, and eliminating active nests.
A. Fondness for honeydew
B. Kill foraging ants and destroy nests
C. Combination of good sanitation
D. Thin-waisted
E. None of the Above

10. Insecticide sprays and baits can be used to _____, but strategies designed to prevent further infestations should be used in conjunction with chemical treatment.
A. Fondness for honeydew
B. Kill foraging ants and destroy nests
C. Combination of good sanitation
D. None of the Above

Termites

11. Termites also _____ during the spring and look similar to flying ants. Examine them closely to make sure that you have the correct pest!

A. Fondness for honeydew
B. Kill foraging ants and destroy nests
C. Combination of good sanitation
D. Develop wings and swarm
E. None of the Above

12. Ants are _____ and have elbowed antennae.

A. Fondness for honeydew
B. Kill foraging ants and destroy nests
C. Combination of good sanitation
D. Thin-waisted
E. None of the Above

13. _____ have thicker waists and have antennae that resemble strings of tiny beads. You may need a magnifying glass to examine antennal features.

A. Ant(s)
B. Termite(s)
C. Insecticide(s)
D. Dilutions
E. None of the Above

14. As a group, _____have a wide food range, feeding on sweet foods, greasy materials, starchy substances, wood, and all kinds of plant and animal materials. Part of the reason that ants become a nuisance in our homes is that they often like the same kinds of food that we do.

A. Insecticide(s)
B. Dilutions
C. Ant(s)
D. Termite(s)
E. None of the Above

Ant Control

15. There are two categories of _____ that will be encountered with an ant problem. The best control strategy depends on the type of infestation.

A. Ant(s)
B. Termite(s)
C. Insecticide(s)
D. Dilutions
E. None of the Above

16. _____ that live outside will travel inside the home to search for food. Some species may ultimately reside in houses, discussed later in this section.

A. Ant(s)
B. Termite(s)
C. Insecticide(s)
D. Dilutions
E. None of the Above

17. To prevent both of these scenarios, follow these procedures: First, _____ should be sealed to eliminate passages into the home. If you do not seal entry points, ants will probably find their way into your house at some later time.
A. Ant(s)
B. Termite(s)
C. Cracks and crevices
D. Dilutions
E. None of the Above

18. Second, scrub around entry points with a _____ (to remove the trail pheromone) and spray a residual insecticide around entry points.
A. Ant(s)
B. Termite(s)
C. Insecticide(s)
D. Dilutions
E. None of the Above

19. Bait treatments and _____ can be used to control ants in the outside nest. To be effective, baits must be placed in areas where ants frequent, be eaten, and be taken back to the nest.
A. Successfully drench
B. Bait treatments
C. Insecticide(s)
D. Dilutions
E. None of the Above

20. There are several different kinds of _____ available, and you may have to do a little trial-and-error to find the proper bait. Because the ants must get back to the nest for satisfactory control, this strategy may be incompatible with insecticide sprays, which may kill worker ants before they can get back to the nest with the bait.
A. Successfully drench
B. Baits
C. Insecticide(s)
D. Dilutions
E. None of the Above

21. The successful use of a bait may take several weeks or more. Insecticide dilutions can be used outside to _____ant nests. Be sure to follow label recommendations for correct procedures when applying the insecticide.
A. Successfully drench
B. Bait treatments
C. Insecticide(s)
D. Dilutions
E. None of the Above

22. There are some types of ants that actually _____ your home, instead of merely entering to forage for food and returning outdoors.
A. Successfully drench
B. Bait treatments
C. Establish a nest inside
D. Dilutions
E. None of the Above

23. Ants in this category may be present year round, although they will be more active in the _____.
A. Warmer months
B. Bait treatments
C. Establish a nest inside
D. Dilutions
E. None of the Above

24. Ant species that may live in United States homes include crazy ants, odorous house ants, pavement ants, pharaoh ants, thief ants, and_____.
A. Successfully drench
B. Bait treatments
C. Carpenter ants
D. Dilutions
E. None of the Above

25. All of these ants may infest food products. Spraying a _____to control foraging workers may provide only short-term control.
A. Residual insecticide
B. Bait treatments
C. Establish a nest inside
D. Dilutions
E. None of the Above

Carpenter Ants
26. Carpenter ants are usually larger 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. Worker ants range in size from 5/16 to 7/16 inches long. 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 _____as nesting sites.
A. Cracks and gaps
B. Areas under stones
C. Sweet baits
D. Interior walls
E. None of the Above

27. Once the carpenter ant nest has been located, control is relatively easy. Treatment options include use of a _____or residual contact insecticide applied as a dust or spray to the nest.
A. Bait
B. Trap
C. Sweet baits
D. Dust
E. None of the Above

28. Read and follow the product label for best results. It may be necessary to drill small holes in the wall voids, _____, 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. Cracks and gaps
B. Areas under stones
C. Baseboards
D. Interior walls
E. None of the Above

29. Carpenter ants are most active in the evening hours, _____, both inside the house and outside. By following the ants, you may be able to tell where the nest is.
A. Foraging for all kinds of food
B. Push the sawdust
C. Insecticide dust
D. Trim all trees
E. None of the Above

30. Because carpenter ants keep the tunneled galleries very clean and _____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. Foraging for all kinds of food
B. Push the sawdust
C. Insecticide dust
D. Trim all trees
E. None of the Above

31. Once a nest is found, treatment is usually easy with either an _____or spray. Injection of insecticide into wall voids or the nest itself may be necessary to reinsure complete control.
A. Foraging for all kinds of food
B. Push the sawdust
C. Insecticide dust
D. Trim all trees
E. None of the Above

32. To prevent further carpenter ant infestations, _____and bushes so branches do not touch the house and correct moisture problems such as leaky roofs and plumbing.
A. Foraging for all kinds of food
B. Push the sawdust
C. Insecticide dust
D. Trim all trees
E. None of the Above

33. _____exposed wood construction before it becomes wet. Replace previously ant-infested wood, rotted or water-damaged wooden parts of the structure and eliminate wood/soil contacts. Remove dead stumps on the property and store firewood off the ground and away from the structure.
A. Paint and/or seal
B. Push the sawdust
C. Insecticide dust
D. Trim all trees
E. None of the Above

34. Unlike other home-inhabiting ants, carpenter ants cause structural damage to wood by _____inside wood structures. However, they rarely nest in sound wood, but consistently invade wood that has become wet and started to decay.
A. Foraging for all kinds of food
B. Push the sawdust
C. Insecticide dust
D. Tunneling and nesting
E. None of the Above

35. The best way to control carpenter ants that inhabit a dwelling is to find the nest and _____.
A. Destroy it
B. Continue to produce
C. Within the walls
D. Around leaky plumbing
E. None of the Above

36. Insecticide sprays inside the home will kill some of the worker ants, but unless the entire nest is treated, the queen will _____additional members of the colony.
A. Destroy it and move on
B. Continue to produce
C. Live within the walls
D. Live around leaky plumbing
E. None of the Above

37. Locating a nest can be difficult because nests may be in locations _____or roof rafters. At this point, some homeowners may prefer to work with a professional pest control company.
A. Destroy it
B. Continue to produce
C. Within the walls
D. Around leaky plumbing
E. None of the Above

38. The most likely places to find carpenter ant nests are where wood has been wet and weathered, such as rotting timbers about the foundation, window sills, porches, _____, and in rafters under a leaky roof.
A. Around leaky plumbing
B. Continue to produce
C. Within the walls
D. Perimeter of a home
E. None of the Above

Perimeter Insecticide Treatments
39. The most commonly used method for controlling carpenter ants is treating the _____with a dust or spray. There are several products available for this type of application, but Suspend SC, Talstar Concentrate and Cynoff WP are the best. When used in accordance with their labels they work well.
A. Nest
B. Perimeter of a home
C. Walls
D. Around leaky plumbing
E. None of the Above

40. These treatments do not keep ants from entering a home from overhead trees and power lines. Also, as a stand alone treatment, they rarely eliminate ants_____.
A. Inside voids and walls
B. Continue to produce
C. Within the walls
D. Around leaky plumbing
E. None of the Above

Pharaoh Ant Monomorium pharaonis

41. Pharaoh workers are very small (about 1/16-inch long), light yellow to reddish brown in color, with the abdomen (hind portion of body) somewhat darker._____. The petiole (narrow waist between the thorax and abdomen) has two nodes and the thorax has no spines. Eyes are well-developed. The antennal segments end in a distinct club with three progressively longer segments. This is in contrast to the thief ant's 2-segmented club.

A. There is no stinger
B. Pseudomonas
C. Sugar ant
D. Worker ants
E. None of the Above

Pest Status

42. Very common throughout the U.S. and the most commonly occurring indoor ant; in hospitals, it can be a carrier of more than a dozen pathogenic bacteria, including Staphylococcus, Salmonella, _____, and Clostridium; these ants do not sting and usually do not bite.

A. Momma Queen
B. Pseudomonas
C. Sugar ant
D. Worker ants
E. None of the Above

43. Life Cycle and Habits

Description: Also called the_____, odorous or piss ant, these are some of the smallest ants, the workers are about 1/12-16 inch long, with a light tan to reddish body. Over 200 species of ants are known to exist in the U.S. A number of other ant species are occasionally encountered in and around the home.

A. Piss ant
B. Ghost ant
C. Sugar ant
D. Worker ants
E. None of the Above

Winged stage

Life Cycle

44. Development of _____progresses from eggs (5-6 days), to several larval stages (22-24 days), pre-pupal stage (2 to 3 days), a pupae (9-12 days), and adult ants, thus taking from 38 to 45 days from egg to adult (4 days longer for sexual forms).

A. Worker ants
B. Pseudomonas
C. Sugar ant
D. Queen ants
E. None of the Above

45. Colonies consist of one to several hundred_____, sterile female worker ants, periodically produced winged male and female reproductive ants (sexuals), and brood (developmental stages).

A. Worker ants
B. Pseudomonas
C. Sugar ant
D. Queen ants
E. None of the Above

Female Pharaoh

46. A Female Pharaoh ant can lay _____in her lifetime.
A. 400 or more eggs
B. 10 to 12 eggs
C. 5 to 7 eggs
D. 38 to 45 eggs
E. None of the Above

47. Most lay _____per batch in the early days of egg production and only 4 to 7 eggs per batch later.
A. 400 or more eggs
B. 10 to 12 eggs
C. 5 to 7 eggs
D. 38 to 45 eggs
E. None of the Above

48. At 80°F and 80 percent relative humidity, eggs hatch in_____. The larval period is 18 to 19 days, prepupal period three days and pupal period nine days.
A. 400 or more days
B. 10 to 12 days
C. 5 to 7 days
D. 38 to 45 days
E. None of the Above

49. About four more days are required to produce sexual female and male forms. The entire life cycle takes about _____depending on temperature and relative humidity.
A. 38 to 45 days
B. 10 to 12 days
C. 5 to 7 days
D. 38 to 45 days
E. None of the Above

50. Periodically a queen, together with a few workers carrying _____(eggs, larvae, and pupae), leaves the nest and sets up a new colony elsewhere, quickly spreading an infestation.
A. Immatures
B. Fractionating males
C. Thimbles
D. Eggs
E. None of the Above

Common Pest Cockroaches

51. Common pest cockroaches include the American, German, Oriental, Madeira, and _____.
A. Asian
B. American
C. Madeira
D. Brown-banded
E. Oriental
F. None of the Above

52. The _____ cockroach began to cause concern in the United States when it appeared in large numbers in Florida in the late 1980s.
A. Asian
B. American
C. Madeira
D. German
E. Oriental
F. None of the Above

53. All but the _____ cockroach are introduced species to North America.
A. Asian D. German
B. American E. Oriental
C. Madeira F. None of the Above

Life Cycle
54. All roaches have _____in their life cycle -- egg, nymph (young) and adult.
A. Ootheca D. Internode
B. Imago E. Three stages
C. Pedipalps F. None of the Above

55. Females carry a bean-shaped egg capsule (_____) which is full of eggs. The newly emerged nymphs are identical to their parents except for their smaller size and lack of wings.
A. Ootheca D. Internode
B. Imago E. Three stages
C. Pedipalps F. None of the Above

56. The _____ grow into adults by periodically shedding their skins, and may appear white for a few hours until their new skin darkens.
A. Detritivore D. Dealates
B. Nymphs E. Instar
C. Malformation F. None of the Above

Live Everywhere
57. Cockroaches can be present in almost any_____. They move quickly and are especially active at night.
A. Home D. Place inhabited by humans
B. Inside household goods E. Area
C. Business F. None of the Above

58. Characteristically, most roaches _____or between surfaces that provide darkness and cover. Inside buildings, roaches move freely between rooms or adjoining apartments using wall spaces, plumbing and other utility installations.
A. Live in cracks and crevices D. Molt in cracks and crevices
B. Breed in cracks and crevices E. Hide in cracks and crevices
C. Die in cracks and crevices F. None of the Above

59. They _____in food and beverage boxes, grocery sacks, animal food and other household goods.
A. Cause allergens D. Reject pesticides
B. Love to eat E. Can be carried into structures
C. Are especially active at night F. None of the Above

60. Cockroaches can eat almost anything, but they are especially partial to starchy foods and meat products. They feed on such diverse items as cereals, pastries, chocolate, milk products, beverages, cooked potatoes, glue, _____, wall paper, animal food, fresh or dried blood, excrement, dead animals and leather products.
A. Allergens D. Vegetables
B. Book bindings E. Starchy foods and meat products
C. Bait Gel F. None of the Above

Damage

61. Disease Transmission. Cockroaches can carry _____that cause human diseases, including food poisoning, dysentery and diarrhea. However, roaches have not been associated with serious disease outbreaks in the United States.

A. Allergen(s)
B. Organisms
C. Repulsive odor
D. Germs
E. Pathogen(s)
F. None of the Above

Allergy

62. Roaches can cause _____in some people. The response is caused by roach "allergen" that is ingested with contaminated food or inhaled when dried fecal particles and fragments of ground-up bodies of dead roaches are mixed with house dust.

A. Allergens
B. Mutations
C. Allergic reactions
D. Considerable psychological or emotional distress
E. Disease
F. None of the Above

Anxiety

63. The _____of cockroaches can cause considerable psychological or emotional distress in some individuals.

A. Sight
B. Odor
C. Smell
D. Considerable psychological or emotional distress
E. Long lasting view
F. None of the Above

64. Cockroaches usually do not bite, but their heavy leg spines_____.

A. Will poke
B. May scratch
C. Have sharp edges
D. Will cause considerable psychological or emotional distress
E. Are not a threat
F. None of the Above

Scientific Classification

65. Cockroaches make up the order Blattodea, which contains_____.

A. Family Blattidae
B. Madeira cockroach
C. Cryptocercidae
D. Five families
E. Gromphadorina portentosa
F. None of the Above

66. The American cockroach is_____, and the Oriental cockroach is Blatta orientalis, both in the family Blattidae.

A. Family Blattidae
B. Madeira cockroach
C. Periplaneta americana
D. Blatella germanica
E. Gromphadorina portentosa
F. None of the Above

67. The German cockroach, Blatella germanica, the Asian cockroach, _____, and the brownbanded cockroach, Supella longipalpa, are in the family Blatellidae.

A. Family Blattidae
B. Madeira cockroach
C. Cryptocercidae
D. Blatella germanica
E. Blatella asahinai
F. None of the Above

68. The Madeira cockroach is Leucophaea maderae, the Brazilian cockroach is Blaberus giganteus, and the Madagascar hissing cockroach is _____, all in the family Blaberidae.

A. Family Blattidae
B. Madeira cockroach
C. Cryptocercidae
D. Blatella germanica
E. Gromphadorina portentosa
F. None of the Above

69. The remaining families are the Cryptocercidae and the_____.
A. Family Blattidae D. Blatella germanica
B. Madeira cockroach E. Polyphagidae
C. Cryptocercidae F. None of the Above

70. There are 55 species of _____in the United States, but only five of these are troublesome in the most States.
A. Family Blattidae D. Blatella germanica
B. Madeira cockroach E. Cockroaches
C. Cryptocercidae F. None of the Above

German Cockroach
71. The German cockroach is the most common and the most difficult to control. Both adults and nymphs are _____and have two longitudinal dark lines on their thorax (back).
A. General in appearance D. Have two longitudinal dark lines on their thorax (back)
B. Instars E. Black
C. Light brown F. None of the Above

72. Adults are 1/2 to 3/4 inch long, and both males and females have _____as long as the body.
A. Antennas D. Two longitudinal dark lines on their thorax (back)
B. Wings E. Legs
C. Eggs F. None of the Above

73. _____ are similar in general appearance, but lack wings and may be as small as 1/8 inch.
A. Instars D. Two longitudinal dark lines on their thorax (back)
B. Filiforms E. Nymph(s)
C. Immature stages F. None of the Above

74. The adult German cockroach is about 5/8 inch long, overall light brown in color with wings that cover the_____.
A. Internode D. Abdomen
B. Dealates E. Furculum
C. Proboscis F. None of the Above

75. The _____just behind the head (pronotum) is marked with two prominent black stripes.
A. Osmeterium D. Wings
B. Thoracic shield E. Poikilotherm
C. Scutellum F. None of the Above

76. Immature stages (nymphs) are smaller, _____ and have a pale stripe (on at least the second and third thoracic segments in first stage nymphs) running lengthwise down the middle of the darker brown body.
A. First stage nymphs D. Wingless
B. Adult(s) E. Nymph(s)
C. Immature stages F. None of the Above

77. The field cockroach, Blattella vaga Hebard, is similar to the _____ in appearance, but it occurs primarily outdoors where it feeds on decaying plant materials.
A. German cockroach D. Brownbanded cockroach
B. Field cockroach E. Nymphs
C. Banded F. None of the Above

78. Compared to the _____, it is more active during daylight hours and will be found around lights. They also are known to fly when disturbed.
A. German cockroach D. Brownbanded cockroach
B. Field cockroach E. Nymphs
C. Banded F. None of the Above

79. The _____, Supella longipalpa (Fabricius) is about the same size as the German cockroach, but appear " banded" because the wings are marked with a pale brown band at the base and another about a third of the distance from the base.
A. German cockroach D. Brownbanded cockroach
B. Field cockroach E. Nymphs
C. Banded F. None of the Above

80. _____ produce an egg capsule that is attached to the end of the abdomen for up to a month before being dropped a day or so before eggs hatch.
A. German cockroach D. Brownbanded cockroach
B. Field cockroach E. Nymphs
C. Banded F. None of the Above

81. Each 5/16 inch long, _____ contains 30 to 40 eggs (oothecae) which hatch in 2 to 4 days after being deposited.
A. New infestations D. Dactyls
B. Diapause E. Mesophyll
C. Scutellum F. None of the Above

82. _____from eggs are less than 1/8 inch long and wingless. They develop through 6 to 7 stages (instars) over 74 to 85 days (varying with temperature) before becoming adults. There may be four generations per year.
A. New infestations D. Femora
B. Dealates E. Nymphs hatching
C. Parthenogenesis F. None of the Above

83. This is mainly an indoor species, although they will also _____from structure to structure.
A. Start infestations D. Have a life expectancy of six months
B. Migrate outdoors E. Fly
C. Be active at night F. None of the Above

84. Occasionally, new infestations begin by bringing in cartons and other materials from infested structures that_____.
A. Start new infestations D. Harbor the roaches or their eggs
B. Cause allergic reactions E. Start in and around the landscape
C. Are mainly active at night F. None of the Above

85. Kitchens, bathrooms and other locations that provide food, moisture, warmth and shelter are_____.
A. Great new infestations D. Wet
B. Preferred habitats E. Dry
C. Mainly active at night F. None of the Above

86. German cockroaches are mainly active at night, when they _____for food and water.
A. Search D. Mesophyll
B. Frass E. Roset
C. Detritivore F. None of the Above

87. During the day, they remain concealed in _____unless they are over-crowded, with all developmental stages occurring together.
A. Brush
B. Cracks and crevices
C. Table tops
D. Groups
E. Masses on interior walls
F. None of the Above

88. They also can occur in attics, _____, crawl spaces, foundation cracks, garbage areas and around the landscape. May spread food contaminants.
A. Microwave ovens
B. Window sills
C. Muffler pipes
D. Coffee machines
E. Wall voids
F. None of the Above

89. Some people have allergic reactions to cockroaches or _____(e.g., feces, body extracts).
A. Infestations
B. Allergic reactions
C. Eggs
D. Cockroach residues
E. Droppings
F. None of the Above

90. One of the most common household cockroach pests in the U.S.; presence in homes is a nuisance and they may spread food contaminants. Some people have _____ to cockroaches or cockroach residues (e.g., feces, body extracts).
A. Infinity
B. Attraction
C. Allergic reactions
D. Desire
E. Move immediately from
F. None of the Above

91. The German cockroach has approximately six generations per year and _____is completed in 50 to 60 days.
A. Crepuscular
B. Will live
C. Internode
D. Dimorph
E. Each generation
F. None of the Above

92. The adult German cockroaches have a_____. This roach cannot fly but may glide very short distances if disturbed.
A. Instar
B. Internode
C. Malformation
D. Life expectancy of twelve months
E. Life expectancy of six months
F. None of the Above

93. German cockroaches can live in almost any room of a home or building. Because these roaches require water, they prefer a _____, such as around kitchen and bathroom sinks, appliances, furnaces, water heaters and furnace ducts.
A. Warm dry area
B. Dark cold area
C. Home
D. Warm moist environment
E. Source of water
F. None of the Above

94. A roach does not need head to breathe -- they _____through their bodies and can survive for a month without food. A headless cockroach will live for about a week until it dies of thirst.
A. Absorb oxygen
B. Will live
C. Estivate
D. Metamorphose
E. Overwinter
F. None of the Above

Brownbanded Cockroach

95. Both nymphs and adults of this species are _____and can be distinguished easily by the presence of two angled or transverse bands across the base of the wings and abdomen.
A. Black D. Internode
B. Red E. Detritivore
C. Light brown F. None of the Above

96. Adult males are 1/2 to 5/8 inch long; the female is slightly shorter. Though both have wings, only the _____ can fly.
A. Male D. Nymphs and adults
B. Female E. Instars
C. TV roaches F. None of the Above

97. The _____ carries each egg capsule for only a day or two before attaching it to a protected surface.
A. Adult males D. Dealates
B. Female E. Phytotoxemia
C. Ovipositor F. None of the Above

98. The egg capsules are usually_____, and most of the eggs hatch within 50 days.
A. Diapause D. Deposited in clusters or rows
B. Cursorial E. Deposited in frass
C. Scutellum F. None of the Above

99. Approximately 5 to 18 egg capsules are produced per female, each containing 19 eggs. About 3 to 9 months are required to complete the _____.
A. Diapause D. Defoliate, defoliation
B. Estivation E. Reproductive cycle
C. Metamorphosis F. None of the Above

100. _____ prefer a dry, warm environment. They are generally found on ceilings, high on walls, and in light switches, closets and furniture. In some places they are known as "TV roaches" because of their frequent presence in living-room furniture and appliances.
A. Adult males D. Nymphs and adults
B. Female E. Reproductives
C. TV roaches F. None of the Above

Spider Section

101. The Chelicerata includes spiders and scorpions, _____, horseshoe crabs, daddy-longlegs, and extinct "sea-scorpions", to name a few.
A. Wasps and Mites
B. Mites and ticks
C. Crabs and Cockroaches
D. All Arthropods
E. None of the Above

102. Chelicerata is the second most prominent order of terrestrial arthropods, after the uniramians. Most of its marine representatives are extinct, but were prominent in the _____and included some fearsome predators.
A. Metaphidippus Era
B. Prehistoric time
C. Paleozoic Era
D. Devonian Period
E. None of the Above

103. Chelicerata are now distinguished from the other _____by the possession of (at least) six pairs of appendages. These normally include four pairs of walking legs, a pair of chelicerae and a pair of pedipalps.
A. Metaphidippus
B. Mites and ticks
C. Crabs
D. Arthropod groups
E. None of the Above

104. Chelicerata have no mandibles and no antennae and the body is divided into two, not three, sections, as in the Uniramia. They are, however, normally _____, have a through gut, have uniramous appendages, a non-calcareous exoskeleton, and are gonochoristic.
A. Bilaterally symmetrical
B. Completely relying
C. They spin a thread
D. They form a Y-shaped structure and
E. None of the Above

105. No chelicerates possess jaws for _____, but suck up their food in liquid or semi-liquid form.
A. Communication
B. Inject digestive juices
C. Biting and chewing
D. Breathing
E. None of the Above

106. Most species go in for external digestion to some extent, meaning they secrete digestive juices onto the food item as it is held close to the mouth or _____into their prey's body, and suck up the half-digested soup that results.
A. Palps
B. Inject digestive juices
C. Biting and chewing
D. Communication
E. None of the Above

107. The inclusion of the class Pycnogonida in the Chelicerata is _____but not scientifically proven; the fossil record for pycnogonids is very scant and they differ in many ways from the other chelicerates.
A. Control insect populations
B. Feed on detritus
C. Biting and chewing
D. Generally accepted
E. None of the Above

108. The Chelicerata contain more than 80,000 species known to science, most of which are Arachnids divided almost evenly between the _____.
A. Spiders and the mites
B. Crabs and wasps
C. Mites and crabs
D. Spiders and crabs
E. None of the Above

109. Chelicerates occupy a variety of roles in the ecology of marine and terrestrial systems. While many spiders build webs, others do not, but instead _____as it passes by. This is also the tactic used by scorpions, another group of chelicerate predators.
A. Control insect populations
B. Feed on detritus
C. Feed on the blood
D. Ambush prey
E. None of the Above

110. The predatory habits of these critters help to _____in many parts of the world.
A. Control insect populations
B. Feed on the blood
C. Ambush insects
D. Feed on detritus
E. None of the Above

111. Some arachnid chelicerates are _____, such as ticks and mites.
A. Pest population controllers
B. Detritus feeders
C. Blood feeders
D. Parasites
E. None of the Above

112. Chelicerates live upon the bodies of other animals and _____, skin, or hair. Some of these carry diseases, which they pass on to the host when they feed.
A. Control insect populations
B. Feed on the blood
C. Ambush insects
D. Feed on detritus
E. None of the Above

113. Other chelicerates are tiny organisms that _____, the bits of decaying matter that accumulate on and below the ground. The first terrestrial chelicerates are believed to have been detritus feeders.
A. Control insect populations
B. Feed on the blood
C. Ambush prey
D. Feed on detritus
E. None of the Above

114. Parental care is not common among the chelicerates, but some scorpions will carry their young on their backs for a time. In most cases, however, no such care is provided, and the young must fend for themselves from the time they _____.
A. Survive
B. Molt
C. Hatch
D. Mate
E. None of the Above

115. Survival is then dependant on the fact that large numbers of eggs are produced at a time, and it is likely that at least a few will _____.
A. Survive
B. Molt
C. Hatch
D. Mate
E. None of the Above

116. Those ancient spiders were relatively large, and their bodies were segmented. In contrast, almost all spiders _____have an unsegmented abdomen.
A. Who survive
B. With 8 legs
C. Hatch
D. Living today
E. None of the Above

117. Only members of the suborder Mesothelae still exhibit a segmented abdomen, and these spiders are generally considered the most _____ types of spiders.
A. Advanced
B. Primitive
C. Dangerous
D. Violent
E. None of the Above

118. Spiders are mostly terrestrial, of the class Arachnida, order Araneae, with four pairs of legs and a two-part body consisting of a(n) _____, or prosoma, and an unsegmented abdomen, or opisthosoma.
A. Digestive gland
B. Cephalothorax
C. Pedipalps
D. Set of Book lungs
E. None of the Above

119. The _____ is covered by a shield, or carapace, and bears eight simple eyes.
A. Digestive gland
B. Cephalothorax
C. Pedipalps
D. Book lungs
E. None of the Above

120. On the underside of the spider's head (the cephalic part of the cephalothorax) are two pairs of appendages, the anterior pair called chelicerae, and the second pair _____, with which the spider captures and paralyzes its prey, injecting into it venom produced in the poison glands.
A. Digestive gland
B. Cephalothorax
C. Pedipalps
D. Book lungs
E. None of the Above

121. The spider then liquefies the tissues of the prey with a digestive fluid and sucks this broth into its stomach, where it may be stored in a(n) _____.
A. Digestive gland
B. Cephalothorax
C. Pedipalps
D. Book lungs
E. None of the Above

122. Breathing is by means of tracheae (air tubes) or _____, or both.
A. Digestive gland
B. Cephalothorax
C. Pedipalps
D. Book lungs
E. None of the Above

123. Arachnid _____ are similar to the gill books of horseshoe crabs, but are internal and adapted to a terrestrial habitat.
A. Digestive gland
B. Cephalothorax
C. Pedipalps
D. Book lungs
E. None of the Above

124. Three pairs of _____toward the tip of the abdomen produce protein-containing fluids that harden as they are drawn out to form silk threads.
A. Digestive glands
B. Legs
C. Pedipalps
D. Spinnerets
E. None of the Above

125. Several kinds of silk glands and _____ produce different kinds of silk used variously for constructing cocoons or egg sacs, spinning webs, and binding prey; other light strands are spun out for ballooning, or floating, the spiders, especially young ones, long distances on air currents.
A. Digestive glands
B. Cephalothoraxs
C. Pedipalps
D. Spinnerets
E. None of the Above

Cephalothorax Structures
126. The cephalothorax contains a number of structures and appendages: one pair of biting mouthparts known as chelicerae; a pair of _____; one pair of short, leglike appendages called pedipalps or palps; and four pairs of legs.
A. Chelicerae
B. Palps
C. Fangs
D. Poison glands
E. None of the Above

127. The spider's eight eyes are also located on the _____.
A. Chelicerae
B. Cephalothorax
C. Palps
D. Top of the poison glands
E. None of the Above

Mouthparts

128. When a spider catches prey, it uses a pair of jointed appendages known as the _____, located in front of the mouth opening. Chelicerae resemble tiny pocketknives.
A. Chelicerae
B. Cephalothorax
C. Fangs
D. Poison glands
E. None of the Above

129. Each _____ has a sharp fang that swings out of its resting position to stab into the victim. Near the tip of the fang is a duct opening that comes from a poison gland.
A. Chelicera
B. Cephalothorax
C. Palp
D. Poison glands
E. None of the Above

130. The _____ acts like a hypodermic needle—it ejects venom from the poison gland and delivers it into the prey.
A. Chelicerae
B. Cephalothorax
C. Fang
D. Poison glands
E. None of the Above

131. Spiders also use _____ as multipurpose tools. They have been called the "hands" of the spider.
A. Chelicerae
B. Cephalothorax
C. Palps
D. Poison glands
E. None of the Above

132. Spiders can use their _____ to perform tasks such as digging burrows in the soil and transporting small prey.
A. Chelicerae
B. Cephalothorax
C. Fangs
D. Poison glands
E. None of the Above

Poison Glands

133. Most spiders have a pair of poison glands that lie within the _____.
A. Chelicerae
B. Cephalothorax
C. Fang area
D. Palps
E. None of the Above

134. Each bulblike poison gland produces and stores toxin. A muscle spirals around the gland. When this muscle contracts, it squeezes poison from the gland through a duct into the _____ of the chelicerae, which then pass the poison into the prey.
A. Chelicerae
B. Cephalothorax
C. Fangs
D. Poison glands
E. None of the Above

Palps and Legs
135. Behind the chelicerae is a pair of palps, _____that are used in feeding and as feelers.
A. That contain body fluids
B. That transfer sperm
C. Sensitive to touch
D. Segmented limbs
E. None of the Above

136. Male spiders also use palps to _____to females during mating. Adjacent to the palps are four pairs of long, hairy legs.
A. Transfer body fluid
B. Transfer sperm
C. Used to touch
D. Have seven jointed segments
E. None of the Above

137. Unlike human hair, each spider hair found on the legs acts as a sensory organ, _____ and vibration.
A. Contains body fluid
B. Used to transfer sperm
C. Sensitive to touch
D. Has seven jointed segments
E. None of the Above

138. Each leg is made up of _____, called the coxa, trochanter, femur, patella, tibia, metatarsus, and tarsus.
A. Tiny receptacles
B. Reproductive organs, heart and silk glands
C. Two sperm-producing testes
D. Seven jointed segments
E. None of the Above

139. More than 30 muscles control the movement of each leg. In addition, some joints of the leg move by the hydraulic action of _____.
A. Body fluid
B. Hydraulic action
C. The palps
D. Seven jointed segments
E. None of the Above

140. The tips of the legs have two or three small claws that are used for _____the spider's silk thread.
A. Molting
B. Transferring sperm
C. Climbing or grasping
D. Moving the seven jointed segments
E. None of the Above

141. Many ground spiders have specialized adhesive hairs _____, known as claw tufts or scopulae.
A. Used to attack prey
B. Beneath their claws
C. Used for climbing or grasping
D. Used to spin webs
E. None of the Above

142. These claw tufts enable the spiders to _____on smooth, vertical surfaces—even upside down on glass.
A. Climb upside down
B. Transfer sperm
C. Sensitivity touch
D. Walk sure-footedly
E. None of the Above

Sensory Organs
143. Most spiders are active at night, and as a result, they use their other senses more than they use their _____, which is not well developed. In addition to the thousands of hairs found on the palps and legs that are highly sensitive to touch and vibrations, spiders also have hairs on their feet that they use to taste things.
A. Eyesight or Good vision
B. Simple eyes or Eyes
C. Spigots
D. Silk glands
E. None of the Above

144. Most spiders have four pairs of _____ (eyes with a single lens) that are located on the front of the cephalothorax.
A. Compound palps
B. Simple eyes or Eyes
C. Spigots
D. Palps
E. None of the Above

145. The _____ are usually grouped into two or three rows that form specific patterns in different spider families. This eye arrangement is often used to identify and classify a spider.
A. Eyesight or Good vision
B. Simple eyes or Eyes
C. Spigots
D. Silk
E. None of the Above

146. Unlike spiders that are active at night, spiders that are active during the day, such as jumping spiders and lynx spiders, typically have _____at close range.
A. Good vision
B. Simple eyes or Eyes
C. Poor vision
D. Average vision
E. None of the Above

147. Their vision easily rivals the _____ of many insects, which have compound eyes (eyes with multiple lenses).
A. Eyesight or Good vision
B. Simple eyes or Eyes
C. Advance
D. Best
E. None of the Above

Spider's Abdomen
148. The spider's abdomen is soft and saclike. On the underside of the tip of the abdomen are three pairs of _____.
A. Palps
B. Shortened limbs
C. Spigots
D. Spinnerets
E. None of the Above

149. Each spinneret is studded with many fine, hair-like tubes called spigots, which produce a variety of silk threads. The _____ lead to several large silk glands inside the abdomen.
A. Palps
B. Shortened limbs
C. Spigot
D. Chelicerae
E. None of the Above

150. _____ is formed as a liquid inside these abdominal glands.
A. Digestive system fluids
B. Sperm
C. Larva
D. Silk
E. None of the Above

Tick Section
151. Most hard ticks undergo a 2-year life cycle in which they begin as _____.
A. 5-legged larvae
B. 8-legged larvae
C. 3-legged larvae
D. 6-legged larvae
E. None of the above

152. These ticks generally feed for_____.
A. Many days
B. Weeks
C. Months
D. Years
E. None of the above

153. The larvae hatch from eggs in the_____.
A. Winter
B. Spring
C. Summer
D. Fall
E. None of the above

154. If the larvae do not find a host for a blood meal, they _____.
A. Wait for a host
B. Attach to the ground
C. Live for a few days
D. Die
E. None of the above

155. Larvae that successfully feed then fall off the host live in the soil and decaying vegetation over the_____.
A. Winter
B. Spring
C. Fall
D. Summer

156. In_____, most often in May and June, the larvae molt into 8-legged nymphs.
A. Winter
B. Spring
C. Fall
D. Summer
E. None of the above

157. These _____ are quite small and seek their blood meal from a small vertebrate.
A. Nymphs
B. Dealates
C. Diapause
D. Peromyscus leucopus
E. None of the above

158. The _____ adult tick is somewhat larger and seeks a larger host for its required blood meal.
A. 5-legged
B. 8-legged
C. 3-legged
D. 6-legged
E. None of the above

159. The _____is the preferred host for adult ticks.
A. White-tailed deer
B. White-tailed rabbit
C. Bear
D. Fish
E. None of the above

160. In the United States, only ticks of the genus ornithodoros transmit_____, namely, relapsing fever.
A. Tick borne
B. Vector-borne
C. Human disease
D. Peromyscus leucopus
E. None of the above

161. The biology of soft ticks differs from that of hard ticks in that meals last for only short periods (<1 hour), and disease can be transmitted in less than _____.
A. 1 minute
B. 1 Day
C. 1 Week
D. 1 hour
E. None of the above

162. This tick species occurs from central Texas east to the Atlantic coast and north to Iowa and New York; it has also been reported in northern_____.
A. Atlantic coast
B. Arizona
C. Mexico
D. California
E. None of the above

163. The _____ is found in wooded areas;
A. Nymph
B. Seed tick
C. Lone Star tick
D. Brown dog tick
E. None of the above

164. Each female produces _____eggs, which are deposited under leaf and soil litter in middle to late spring.
A. 100-300
B. 1000-3000
C. 300-800
D. 3,000-8,000
E. None of the above

165. Incubation may take 30 days or longer, depending on_____.
A. Light
B. Temperature
C. Humidity
D. Weather
E. None of the above

166. The newly hatched six-legged immatures, also known as larvae or Seed ticks feed for _____ on a host.
A. 7-16 days
B. 3 to 7 days
C. 9-27 days
D. 4-15 months
E. None of the above

167. After full engorgement the larvae drop from the host into vegetation and shed their skins _____ later.
A. 7-16 days
B. 3 to 7 days
C. 9-27 days
D. 4-15 months
E. None of the above

168. The eight-legged immatures that emerge are called_____.
A. Immatures
B. Nymphs
C. Lone Star ticks
D. Seed ticks
E. None of the above

169. These attach to a second host and feed for up to _____.
A. 38 days
B. 3 to 7 days
C. 9-27 days
D. 13-46 days
E. None of the above

170. The nymphs then detach and rest for_____before they shed their skins to become adults.
A. 38 days
B. 3 to 7 days
C. 9-27 days
D. 13-46 days
E. None of the above

171. Adults attach to a third host, feed for_____, and detach.
A. 38 days
B. 3 to 7 days
C. 6-24 days
D. 13-46 days
E. None of the above

172. Oviposition occurs _____after the last blood meal.
A. 38 days
B. 7-16 days
C. 6-24 days
D. 13-46 days
E. None of the above

173. Larvae may survive for _____.
A. 3-6 months
B. 4-15 months
C. 2-9 months
D. 13-46 days
E. None of the above

174. Nymphs and adults survive for _____each.
A. 3-6 months
B. 4-15 months
C. 2-9 months
D. None of the above

175. The life cycle may take up to _____to complete.
A. 6 years
B. 4-15 months
C. 2-9 months
D. 2 years
E. None of the above

176. Lone Star tick nymphs can move very quickly and may cover a person's legs or arms in less than_____.
A. 13-46 days
B. 5 minutes
C. 4-15 months
D. 10 minutes
E. None of the above

177. Earlier in the _____, female ticks deposit masses of several thousand eggs on the ground.
A. Summer
B. Spring
C. Winter
D. Fall
E. None of the above

178. Anyone unfortunate enough to pass through such a site can easily pick up _____.
A. Dozens of larvae
B. Human Diseases
C. Flea Dirt
D. Seed ticks
E. None of the above

179. These tiny, 6-legged creatures, also called “seed ticks ", are most active between _____.
A. September and October
B. July and October
C. October and November
D. July and August
E. None of the above

180. Adults and nymphs are active from_____.
A. Early spring through midsummer
B. Late summer to early fall
C. Early Spring to late Fall
D. Late fall in early winter
E. None of the above

181. Larvae are active mainly from_____.
A. Early spring through midsummer
B. Late summer to early fall
C. Early Spring to late Fall
D. Late fall in early winter
E. None of the above

182. Low _____and high daytime temperatures restrict the occurrence and activity of these ticks.
A. Evening temperatures
B. Dew points
C. Humidities
D. Morning temperatures
E. None of the above

183. All three life stages of A. americanum aggressively bite people in the southern U.S. Research indicates that live spirochetes are observed in only _____ of A. americanum.
A. 1-3%
B. 2-4%
C. 4-5%
D. 6-9%
E. None of the above

184. The American dog tick is found throughout _____except in parts of the Rocky Mountain region.
A. Asia
B. The United States
C. England
D. Africa
E. None of the above

185. Its habitat includes _____.
A. Wooded areas
B. Abandoned fields
C. Medium height grasses
D. Sunny or open areas around woods
E. ALL of the above

186. The female lays 4,000-6,500 ellipsoidal eggs over a _____ period and then dies.
A. 14-32 day
B. 12-14 day
C. 32-40 day
D. 5-13 day
E. None of the above

187. The eggs usually hatch in _____.
A. 42-60 days
B. 14-32 days
C. 36-57 days
D. 12-36 days
E. None of the above

188. Larvae usually engorge for _____.
A. 3-5 days
B. 3-11 days
C. 5-13 days
D. 6-12 days
E. None of the above

189. Nymphs for _____.
A. 3-5 days
B. 3-11 days
C. 5-13 days
D. 6-12 days
E. None of the above

190. Adult females for _____.
A. 3-5 days
B. 3-11 days
C. 5-13 days
D. 6-12 days
E. None of the above

191. Unfed larvae can live up to _____.
A. 15 months
B. 30 months
C. 20 months
D. None of the above

192. Nymphs can live up to_____.
A. 15 months
B. 30 months
C. 20 months
D. 40 months
E. None of the above

193. Adults can live up to_____ or longer.
A. 15 months
B. 30 months
C. 20 months
D. 40 months
E. None of the above

194. Adults are active from _____.
A. Mid-April to early September
B. June to early September
C. March through July
D. Mid summer to late fall
E. None of the above

195. Nymphs are active from _____.
A. Mid-April to early September
B. June to early September
C. March through July
D. Mid summer to late fall
E. None of the above

196. Larvae are active from _____.
A. Mid-April to early September
B. June to early September
C. Late March through July
D. Mid summer to late fall
E. None of the above

197. High light intensity and _____ stimulate questing behavior.
A. Low relative humidity
B. High relative humidity
C. Low temps
D. High temps
E. None of the above

198. The American dog tick is found throughout _____.
A. Eastern United States
B. Canada
C. Mexico
D. New England
E. None of the above

199. This tick is not known to spread _____, although it can transmit the causal agent of Rocky Mountain spotted fever.
A. Lyme disease
B. Borrelia lonestari
C. Human diseases
D. Seed ticks
E. None of the above

200. Adults become active about mid-April to _____and remain a nuisance until August.
A. Late May
B. Late August
C. Early August
D. Early May
E. None of the above

Common Kinds of Pesticides and their Function
201. Kill nematodes (microscopic, worm-like organisms that feed on plant roots).
A. Fumigants
B. Insecticides
C. Nematicides
D. Microbial pesticides
E. Molluscicides
F. None of the Above

202. Kill eggs of insects and mites.
A. Ovicides
B. Microbial pesticides
C. Pheromones
D. Molluscicides
E. Rodenticides
F. None of the Above

203. Kill microorganisms.
A. Biocides
B. Antimicrobials
C. Fumigants
D. Miticides
E. Rodenticides
F. None of the Above

204. Kill or inactivate disease-producing microorganisms on inanimate objects.
A. Disinfectants and sanitizers
B. Antimicrobials
C. Fumigants
D. Miticides
E. Rodenticides
F. None of the Above

205. Kill fungi (including blights, mildews, molds, and rusts).
A. Disinfectants and sanitizers
B. Fungicides
C. Fumigants
D. Miticides
E. Rodenticides
F. None of the Above

206. Produce gas or vapor intended to destroy pests in buildings or soil.
A. Fumigants D. Microbial pesticides
B. Insecticides E. Molluscicides
C. Nematicides F. None of the Above

207. Control algae in lakes, canals, swimming pools, water tanks, and other sites.
A. Disinfectants and sanitizers D. Miticides
B. Antimicrobials E. Algaecides
C. Fumigants F. None of the Above

208. Kill or repel organisms that attach to underwater surfaces, such as boat bottoms.
A. Disinfectants and sanitizers D. Miticides
B. Antifouling agents E. Rodenticides
C. Fumigants F. None of the Above

209. Kill microorganisms (such as bacteria and viruses).
A. Disinfectants and sanitizers D. Miticides
B. Antimicrobials E. Rodenticides
C. Fumigants F. None of the Above

210. Attract pests (for example, to lure an insect or rodent to a trap).
(However, food is not considered a pesticide when used as an attractant.)
A. Disinfectants and sanitizers D. Attractants
B. Antimicrobials E. Rodenticides
C. Fumigants F. None of the Above

211. Kill weeds and other plants that grow where they are not wanted.
A. Fumigants D. Microbial pesticides
B. Insecticides E. Herbicides
C. Nematicides F. None of the Above

212. Kill insects and other arthropods.
A. Fumigants D. Microbial pesticides
B. Insecticides E. Molluscicides
C. Nematicides F. None of the Above

213. Kill mites that feed on plants and animals.
A. Ovicides D. Molluscicides
B. Miticides E. Rodenticides
C. Pheromones F. None of the Above

214. Microorganisms that kill, inhibit, or out compete pests, including insects or other microorganisms.
A. Fumigants D. Microbial pesticides
B. Insecticides E. Molluscicides
C. Nematicides F. None of the Above

215. Kill snails and slugs.
A. Fumigants D. Microbial pesticides
B. Insecticides E. Molluscicides
C. Nematicides F. None of the Above

216. Biochemicals used to disrupt the mating behavior of insects.
A. Ovicides D. Molluscicides
B. Microbial pesticides E. Rodenticides
C. Pheromones F. None of the Above

217. Repel pests, including insects (such as mosquitoes) and birds.
A. Fumigants D. Repellents
B. Insecticides E. Molluscicides
C. Nematicides F. None of the Above

218. Control mice and other rodents.
A. Ovicides D. Molluscicides
B. Microbial pesticides E. Rodenticides
C. Pheromones F. None of the Above

The term pesticide also includes these substances:
219. Cause leaves or other foliage to drop from a plant, usually to facilitate harvest.
A. Desiccants D. Microbial pesticides
B. Defoliants E. Plant growth regulators
C. Nematicides F. None of the Above

220. Promote drying of living tissues, such as unwanted plant tops.
A. Desiccants D. Microbial pesticides
B. Defoliants E. Plant growth regulators
C. Nematicides F. None of the Above

221. Disrupt the molting, maturity from pupal stage to adult or other life processes of insects.
A. Desiccants D. Insect growth regulators
B. Defoliants E. Plant growth regulators
C. Nematicides F. None of the Above

222. Substances (excluding fertilizers or other plant nutrients) that alter the expected growth, flowering, or reproduction rate of plants.
A. Desiccants D. Microbial pesticides
B. Defoliants E. Plant growth regulators
C. Nematicides F. None of the Above

The U.S. definition of pesticides is quite broad, but it does have some exclusions:
223. _____used to control diseases of humans or animals (such as livestock and pets) are not considered pesticides; such drugs are regulated by the Food and Drug Administration.
A. Antimicrobials D. Drugs
B. Biological control agents E. Biochemical pesticides
C. Biopesticides F. None of the Above

224. Fertilizers, nutrients, and other substances used to promote plant survival and health are not considered plant growth regulators and thus are not _____.
A. Antimicrobials D. Conventional pesticides,
B. Biological control agents E. Pesticides
C. Biopesticides F. None of the Above

225. Products which contain certain_____, such as garlic and mint oil, have been exempted from Federal registration requirements, although State regulatory requirements may still apply.
A. Antimicrobials D. Conventional pesticides
B. Low-risk ingredients E. Biochemical pesticides
C. Biopesticides F. None of the Above

Antimicrobial Pesticides

226. Antimicrobials are especially important because many are_____. They help to control microorganisms (viruses, bacteria, and other microorganisms) that can cause human disease.

A. Public health pesticides
B. Biological control agents
C. Biopesticides
D. Conventional pesticides
E. Biochemical pesticides
F. None of the Above

227. Antimicrobial _____are used as disinfectants in medical settings, where they are present in products used in cleaning cabinets, floors, walls, toilets, and other surfaces.

A. Public health pesticides
B. Biological control agents
C. Biopesticides
D. Conventional pesticides
E. Biochemical pesticides
F. None of the Above

228. Proper use of these _____is an important part of infection control activities employed by hospitals and other medical establishments.

A. Antimicrobials
B. Biological control agents
C. Biopesticides
D. Conventional pesticides
E. Disinfectants
F. None of the Above

Biopesticides

229. Biopesticides are certain types of pesticides derived from such natural materials as animals, plants, _____, and certain minerals.

A. Antimicrobials
B. Biological control agents
C. Bacteria
D. Conventional pesticides,
E. Biochemical pesticides
F. None of the Above

230. Canola oil and baking soda have pesticidal applications and are considered _____.

A. Antimicrobials
B. Biological control agents
C. Biopesticides
D. Conventional pesticides
E. Biochemical pesticides
F. None of the Above

Biopesticides fall into three major classes:

231. _____ consist of a microorganism (e.g., a bacterium, fungus, virus or protozoan) as the active ingredient.

A. Antimicrobials
B. Biological control agents
C. Biopesticides
D. Microbial pesticides
E. Biochemical pesticides
F. None of the Above

232. _____ can control many different kinds of pests, although each separate active ingredient is relatively specific for its target pest[s].

A. Antimicrobials
B. Biological control agents
C. Biopesticides
D. Microbial pesticides
E. Biochemical pesticides
F. None of the Above

233. The most widely used microbial pesticides are subspecies and strains of Bacillus thuringiensis, or Bt. Each strain of this _____ produces a different mix of proteins, and specifically kills one or a few related species of insect larvae.

A. Antimicrobials
B. Biological control agents
C. Biopesticides
D. Bacterium
E. Biochemical pesticides
F. None of the Above

234. While some Bt's control moth larvae found on plants, other Bt's are specific for larvae of flies and mosquitoes. The target insect species are determined by whether the particular Bt produces a protein that can bind to a _____, thereby causing the insect larvae to starve.
A. Antimicrobials
B. Biological control agents
C. Biopesticides
D. Conventional pesticides,
E. Biochemical pesticides
F. None of the Above

235. Plant-Incorporated-Protectants (PIPs) are _____that plants produce from genetic material that has been added to the plant.
A. Pesticidal substances
B. Biological control agents
C. Biopesticides
D. Conventional pesticides,
E. Biochemical pesticides
F. None of the Above

236. _____are naturally occurring substances that control pests by non-toxic mechanisms.
A. Antimicrobials
B. Biological control agents
C. Biochemical pesticides
D. Conventional pesticides
E. Biochemical pesticides
F. None of the Above

237. _____, by contrast, are generally synthetic materials that directly kill or inactivate the pest.
A. Antimicrobials
B. Biological control agents
C. Biopesticides
D. Conventional pesticides
E. Biochemical pesticides
F. None of the Above

238. _____include substances, such as insect sex pheromones that interfere with mating as well as various scented plant extracts that attract insect pests to traps.
A. Biochemical pesticides
B. Biological control agents
C. Biopesticides
D. Conventional pesticides,
E. Biochemical pesticides
F. None of the Above

What are the advantages of using biopesticides?

239. Biopesticides are usually inherently less toxic than _____.
A. Antimicrobials
B. Biological control agents
C. Biopesticides
D. Conventional pesticides
E. Biochemical pesticides
F. None of the Above

240. Biopesticides generally affect only the target pest and closely related organisms, in contrast to broad spectrum, _____ that may affect organisms as different as birds, insects, and mammals.
A. Antimicrobials
B. Biological control agents
C. Biopesticides
D. Conventional pesticides
E. Biochemical pesticides
F. None of the Above

241. _____often are effective in very small quantities and often decompose quickly, thereby resulting in lower exposures and largely avoiding the pollution problems caused by conventional pesticides.
A. Antimicrobials
B. Biological control agents
C. Biopesticides
D. Conventional pesticides,
E. Biochemical pesticides
F. None of the Above

242. When used as a component of Integrated Pest Management (IPM) programs, _____ can greatly decrease the use of conventional pesticides, while crop yields remain high. To use biopesticides effectively, however, users need to know a great deal about managing pests.
A. Antimicrobials
B. Biological control agents
C. Biopesticides
D. Conventional pesticides,
E. Biochemical pesticides
F. None of the Above

What is Malathion?

243. Malathion is an organophosphate (OP) insecticide that has been registered for use in the United States since 1956. It is used in agriculture, residential gardens, public recreation areas, and in_____.

A. Ultra-low volume or (ULV)
B. Organophosphate or (OP)
C. Maximum rate
D. Public health pest control programs
E. High-dose poisoning
F. None of the Above

244. When applied in accordance with the rate of application and safety precautions specified on the label, _____can be used to kill mosquitoes without posing unreasonable risks to human health or the environment.

A. Ultra-low volume or (ULV)
B. Organophosphate or (OP)
C. Malathion
D. Active ingredient
E. High-dose poisoning
F. None of the Above

How is Malathion Used in Mosquito Control?

245. The _____goes through four distinct stages during its life cycle: egg, larva, pupa, and adult.

A. Ultra-low volume or (ULV)
B. Organophosphate or (OP)
C. Mosquito
D. Active ingredient
E. Malathion
F. None of the Above

246 _____ is an adulticide, used to kill adult mosquitoes. In mosquito control programs conducted by state or local authorities.

A. Ultra-low volume or (ULV)
B. Organophosphate or (OP)
C. Maximum rate
D. Active ingredient
E. Malathion
F. None of the Above

247. Malathion is applied by truck-mounted or_____.

A. Ultra-low volume or (ULV)
B. Aircraft-mounted sprayers
C. Maximum rate
D. Active ingredient
E. High-dose poisoning
F. None of the Above

248. Malathion is applied as an _____ spray.

A. Ultra-low volume or (ULV)
B. Organophosphate or (OP)
C. Maximum rate
D. Active ingredient
E. High-dose poisoning
F. None of the Above

249. ULV _____ dispense very fine aerosol droplets that stay aloft and kill mosquitoes on contact.

A. Ultra-low volume or (ULV)
B. Organophosphate or (OP)
C. Maximum rate
D. Active ingredient
E. High-dose poisoning
F. None of the Above

250. _____ applications involve small quantities of pesticide active ingredient in relation to the size of the area treated.

A. Ultra-low volume or (ULV)
B. Organophosphate or (OP)
C. Maximum rate
D. Active ingredient
E. High-dose poisoning
F. None of the Above

251. For mosquito control, Malathion is applied at a maximum rate of 0.23 pounds (or about 2.5 fluid ounces) of _____ per acre, which minimizes exposure and risks to people and the environment.

A. Ultra-low volume or (ULV)
B. Organophosphate or (OP)
C. Maximum rate
D. Active ingredient
E. High-dose poisoning
F. None of the Above

Does Malathion Pose Risks to Human Health?

252. Malathion can be used for public health _____without posing unreasonable risks to the general population when applied according to the label.
A. Ultra-low volume or (ULV) D. Active ingredient
B. Organophosphate or (OP) E. Mosquito control programs
C. Maximum rate F. None of the Above

253. The EPA has estimated the exposure and risks to both adults and children posed by ULV aerial and _____of Malathion.
A. Ultra-low volume or (ULV) D. Active ingredient
B. Ground applications E. High-dose poisoning
C. Maximum rate F. None of the Above

254. Because of the very small amount of _____ released per acre of ground, the estimates found that for all scenarios considered, exposures were hundreds or even thousands of times below an amount that might pose a health concern.
A. Ultra-low volume or (ULV) D. Active ingredient
B. Organophosphate or (OP) E. High-dose poisoning
C. Maximum rate F. None of the Above

255. These estimates assumed several spraying events over a period of weeks, and also assumed that a toddler would ingest some soil and grass in addition to_____.
A. Ultra-low volume or (ULV) D. Active ingredient
B. Skin and inhalation exposure E. High-dose poisoning
C. Maximum rate F. None of the Above

256. At high doses, Malathion, like other _____, can over stimulate the nervous system causing nausea, dizziness, or confusion.
A. Ultra-low volume or (ULV) D. Active ingredient
B. Organophosphates or (OP) E. High-dose poisoning
C. Maximum rate F. None of the Above

257. Severe high-dose poisoning with any _____ can cause convulsions, respiratory paralysis, and death.
A. Ultra-low volume or (ULV) D. Active ingredient
B. Organophosphate or (OP) E. High-dose poisoning
C. Maximum rate F. None of the Above

Does Malathion Pose Risks to Wildlife or the Environment?

258. _____used in mosquito control programs does not pose unreasonable risks to wildlife or the environment.
A. Ultra-low volume or (ULV) D. Active ingredient
B. Organophosphate or (OP) E. Malathion
C. Maximum rate F. None of the Above

259. Malathion degrades rapidly in the_____, especially in moist soil, and it displays low toxicity to birds and mammals.
A. Ultra-low volume or (ULV) D. Environment
B. Organophosphate or (OP) E. High-dose poisoning
C. Maximum rate F. None of the Above

260. Malathion is _____to insects, including beneficial insects such as honeybees. For that reason, the EPA has established specific precautions on the label to reduce such risks.
A. Ultra-low volume or (ULV) D. Active ingredient
B. Highly toxic E. High-dose poisoning
C. Maximum rate F. None of the Above

Larvicides For Mosquito Control

261. The _____ evaluates and registers (licenses) pesticides to ensure that they can be used safely.
A. Prevention programs D. Mosquito control programs
B. Organophosphate or (OP) E. Surveillance and monitoring
C. Bacillus sphaericus F. None of the Above

262. These pesticides include products used in the _____ that states and communities have established.
A. Prevention programs D. Mosquito control programs
B. Organophosphate or (OP) E. Surveillance and monitoring
C. Bacillus sphaericus F. None of the Above

263. To evaluate any pesticide, the EPA assesses a wide variety of tests to determine whether a pesticide has the potential to cause adverse effects on humans, wildlife, fish and plants, including endangered species and_____.
A. Prevention programs D. Mosquito control programs
B. Organophosphate or (OP) E. Surveillance and monitoring
C. Non-target organisms F. None of the Above

264. Officials responsible for mosquito control programs make decisions to use pesticides based on an evaluation of the risks to the general public from diseases transmitted by mosquitoes or on an evaluation of the _____that communities can tolerate from a mosquito infestation.
A. Prevention programs D. Mosquito control programs
B. Nuisance level E. Surveillance and monitoring
C. Bacillus sphaericus F. None of the Above

265. Based on _____, mosquito control officials select specific pesticides and other control measures that best suit local conditions in order to achieve effective control of mosquitoes with the least impact on human health and the environment.
A. Prevention programs D. Mosquito control programs
B. Organophosphate or (OP) E. Surveillance and monitoring
C. Bacillus sphaericus F. None of the Above

266. It is especially important to conduct effective mosquito prevention programs by eliminating _____or applying pesticides to control the early life stages of the mosquito.
A. Prevention programs D. Mosquito control programs
B. Breeding habitats E. Surveillance and monitoring
C. Bacillus sphaericus F. None of the Above

267. Prevention programs, such as elimination of any standing water that could serve as a breeding site, help reduce the _____and the need to apply other pesticides for adult mosquito control.
A. Prevention programs D. Mosquito control programs
B. Organophosphate or (OP) E. Surveillance and monitoring
C. Adult mosquito population F. None of the Above

268. Since no pesticide can be considered 100 percent safe, _____and the general public should always exercise care and follow specified safety precautions during use to reduce risks.
A. Pesticide applicators D. Mosquito control programs
B. Organophosphate or (OP) E. Surveillance and monitoring
C. Bacillus sphaericus F. None of the Above

What are Larvicides?

269. Larvicides kill mosquito larvae. Larvicides include_____, such as the microbial larvicides Bacillus sphaericus and Bacillus thuringiensis israelensis.

A. IPM
B. Control program
C. Bacillus sphaericus
D. Mosquito larvae
E. Biological insecticides
F. None of the Above

270. Since mosquitoes must have water to breed, source reduction can be as simple as turning over trapped water in a container to _____and management of marsh water levels.

A. IPM
B. Control program
C. Bacillus sphaericus
D. Mosquito larvae
E. Undertaking large-scale engineering
F. None of the Above

271. Larviciding involves _____to breeding habitats to kill mosquito larvae. Larviciding can reduce overall pesticide usage in a control program.

A. IPM
B. Control program
C. Applying pesticides
D. Mosquito larvae
E. Temephos
F. None of the Above

272. Killing mosquito larvae before they emerge as adults can reduce or eliminate the need for ground or aerial application of pesticides to_____.

A. IPM
B. Control program
C. Bacillus sphaericus
D. Mosquito larvae
E. Kill adult mosquitoes
F. None of the Above

What are Microbial Larvicides?

273. Microbial larvicides are _____that are registered as pesticides for control of mosquito larvae in outdoor areas such as irrigation ditches, flood water, standing ponds, woodland pools, pastures, tidal water, fresh or saltwater marshes, and storm water retention areas.

A. IPM
B. LarvX
C. Bacteria
D. Mosquito larvae
E. Bacillus thuringiensis israelensis (Bti)
F. None of the Above

274. Duration of effectiveness depends primarily on the_____, the environmental conditions, the formulation of the product, and water quality.

A. IPM
B. LarvX
C. Bacillus sphaericus
D. Mosquito species
E. Bacillus thuringiensis israelensis (Bti)
F. None of the Above

275. Microbial larvicides may be used along with other mosquito control measures in an IPM program. The microbial larvicides used for mosquito control are _____ and Bacillus sphaericus (B. sphaericus).

A. IPM
B. LarvX
C. Bacillus sphaericus
D. Mosquito larvae
E. Bacillus thuringiensis israelensis (Bti)
F. None of the Above

276. _____ is a naturally occurring soil bacterium registered for control of mosquito larvae.

A. IPM
B. LarvX
C. Bacillus sphaericus
D. Mosquito larvae
E. Bacillus thuringiensis israelensis (Bti)
F. None of the Above

277. Bti was first registered by the EPA as an insecticide in 1983. Mosquito larvae eat the _____ product that is made up of the dormant spore form of the bacterium and an associated pure toxin.
A. IPM D. Mosquito larvae
B. LarvX E. Bacillus thuringiensis israelensis (Bti)
C. Bacillus sphaericus F. None of the Above

278. The _____disrupts the gut in the mosquito by binding to receptor cells present in insects, but not in mammals.
A. Toxin D. Mosquito larvae
B. LarvX E. Bacillus thuringiensis israelensis (Bti)
C. Bacillus sphaericus F. None of the Above

279. There are 26 Bti products registered for use in the United States. Aquabac, Teknar, Vectobac, and _____are examples of common trade names for the mosquito control products.
A. IPM D. Mosquito larvae
B. LarvX E. Bacillus thuringiensis israelensis (Bti)
C. Bacillus sphaericus F. None of the Above

280. _____ is a naturally occurring bacterium that is found throughout the world. B. sphaericus was initially registered by the EPA in 1991 for use against various kinds of mosquito larvae.
A. IPM D. Mosquito larvae
B. LarvX E. Bacillus thuringiensis israelensis (Bti)
C. Bacillus sphaericus F. None of the Above

281. Mosquito larvae ingest the bacteria, and as with _____, the toxin disrupts the gut in the mosquito by binding to receptor cells present in insects but not in mammals.
A. IPM D. Mosquito larvae
B. LarvX E. Bacillus thuringiensis israelensis (Bti)
C. Bacillus sphaericus F. None of the Above

282. VectoLex CG and WDG are registered _____products and are effective for approximately one to four weeks after application.
A. IPM D. Mosquito larvae
B. LarvX E. Bacillus thuringiensis israelensis (Bti)
C. B. sphaericus F. None of the Above

Do Microbial Larvicides Pose Risks to Human Health?
283. The microbial pesticides have undergone extensive testing prior to registration. They are essentially nontoxic to humans, so there are no concerns for human health effects with _____ or B. sphaericus when they are used according to label directions.
A. IPM D. Mosquito larvae
B. LarvX E. Bacillus thuringiensis israelensis (Bti)
C. Bacillus sphaericus F. None of the Above

Do Microbial Larvicides Pose Risks to Wildlife or the Environment?
284. Extensive testing shows that _____do not pose risks to wildlife, non-target species, or the environment, when used according to label directions.
A. IPM D. Mosquito larvae
B. Altosid E. Microbial larvicides
C. Methoprene F. None of the Above

What is Methoprene?

285. Methoprene is a compound first registered by the EPA in 1975 that mimics the action of an insect growth-regulating hormone and prevents the normal maturation of_____.

A. IPM D. Insect larvae
B. Altosid E. Nontoxic
C. Methoprene F. None of the Above

286. It is applied to water to kill _____, and it may be used along with other mosquito control measures in an IPM program.

A. IPM D. Mosquito larvae
B. Altosid E. Nontoxic
C. Methoprene F. None of the Above

287. _____ is the name of the methoprene product used in mosquito control and is applied as briquettes (similar in form to charcoal briquettes), pellets, sand granules, and liquids. The liquid and pelletized formulations can be applied by helicopter and fixed-wing aircraft.

A. IPM D. Mosquito larvae
B. Altosid E. Nontoxic
C. Methoprene F. None of the Above

Does Methoprene Pose Risks to Human Health?

288. _____, used for mosquito control according to its label directions, does not pose unreasonable risks to human health.

A. IPM D. Mosquito larvae
B. Altosid E. Nontoxic
C. Methoprene F. None of the Above

289. In addition to posing _____to mammals, there is little opportunity for human exposure, since the material is applied directly to ditches, ponds, marshes, or flooded areas that are not drinking water sources.

A. Low toxicity D. Mosquito larvae
B. Altosid E. Nontoxic
C. Methoprene F. None of the Above

Does Methoprene Pose Risks to Wildlife or the Environment?

290. Methoprene used in _____does not pose unreasonable risks to wildlife or the environment.

A. IPM D. Mosquito larvae
B. Altosid E. Mosquito control programs
C. Methoprene F. None of the Above

291. Toxicity of methoprene to birds and fish is low, and it is _____ to bees.

A. IPM D. Mosquito larvae
B. Altosid E. Nontoxic
C. Methoprene F. None of the Above

292. _____ breaks down quickly in water and soil and will not leach into ground water.

A. IPM D. Mosquito larvae
B. Altosid E. Nontoxic
C. Methoprene F. None of the Above

293. _____ mosquito control products present minimal acute and chronic risk to freshwater fish, freshwater invertebrates, and estuarine species.

A. IPM D. Mosquito larvae
B. Altosid E. Nontoxic
C. Methoprene F. None of the Above

What is Temephos?

294. Temephos is an organophosphate (OP) pesticide registered by the EPA in 1965 to control mosquito larvae, and it is the only organophosphate with_____. It is an important resistance management tool for mosquito control programs; its use helps prevent mosquitoes from developing resistance to the bacterial larvicides.

A. IPM
B. Larvicidal use
C. Larviciding techniques
D. Abate or Temephos
E. Mosquito control
F. None of the Above

295. Temephos is used in areas of standing water, shallow ponds, swamps, marshes, and intertidal zones. It may be used along with other mosquito control measures in an _____ program.

A. IPM
B. OPs
C. Larviciding techniques
D. Abate or Temephos
E. Mosquito control
F. None of the Above

296. _____is the trade name of the temephos product used for mosquito control.

A. IPM
B. OPs
C. Larviciding techniques
D. Abate or Temephos
E. Mosquito control
F. None of the Above

297. _____ is applied most commonly by helicopter but can be applied by backpack sprayers, fixed-wing aircraft, and right-of-way sprayers in either liquid or granular form.

A. IPM
B. OPs
C. Larviciding techniques
D. Abate or Temephos
E. Mosquito control
F. None of the Above

Does Temephos Pose Risks to Human Health?

298. _____, applied according to the label for mosquito control, does not pose unreasonable risks to human health.

A. IPM
B. OPs
C. Larviciding techniques
D. Abate or Temephos
E. Mosquito control
F. None of the Above

299. It is applied to water, and the amount of _____ is very small in relation to the area covered, less than 1 ounce of active ingredient per acre for the liquid and 8 ounces per acre for the granular formulations.

A. IPM
B. OPs
C. Larviciding techniques
D. Abate or Temephos
E. Mosquito control
F. None of the Above

300. _____breaks down within a few days in water, and post-application exposure is minimal.

A. IPM
B. OPs
C. Larviciding techniques
D. Abate or Temephos
E. Mosquito control
F. None of the Above

You are finished, please submit the answer and registration page…