

Registration form

Aerial Application CEU Training Course \$300.00
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

Name _____ **Signature** _____
(This will appear on your certificate as above)

Address: _____

City _____ **State** _____ **Zip** _____ **Email** _____

Phone:
Home () _____ **Work** () _____ **Fax** () _____

License or Operator ID # _____ **Exp Date** _____

Class/Grade _____

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

Commercial Applicator Residential Applicator Industrial Applicator

Pesticide Handler Agricultural Applicator Advisor Aerial Applicator

Other _____

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

Technical Learning College
P.O. Box 420, Payson, AZ 85547-0420
(928) 468-0665 Toll Free (866) 557-1746
info@tlch2o.com Fax (928) 272-0747
Visit us on the web at www.ABCTLC.com

3 digits on the back _____

American Express
Master Card / Visa Card # _____ **Exp. Date** _____

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

Referral's Name _____

Aerial Application Answer Key

Name _____

Phone Number _____

Address _____

Please circle the best answer

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Always call us after faxing the paperwork to ensure that we've received it.

Please mail or fax this survey along with your final exam

AERIAL APPLICATION PROFESSIONAL DEVELOPMENT COURSE

CUSTOMER SERVICE RESPONSE CARD

DATE: _____

NAME: _____

ADDRESS: _____

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?

Any other concerns or comments.

Aerial Application CEU Training Course Assignment

You will have 90 days from the start of this course to have successfully completed this assignment with a score of 70% or better. You may e-mail the answers to TLC, info@tlch2o.com or fax the answers to TLC (928) 272-0747.

1. _____ Kill mites that feed on plants and animals.
 - A. Molluscicides
 - B. Microbial pesticides
 - C. Miticides
 - D. Nematicides
 - E. Ovicides

2. _____ Microorganisms that kill, inhibit, or out compete pests, including insects or other microorganisms.
 - A. Molluscicides
 - B. Microbial pesticides
 - C. Miticides
 - D. Nematicides
 - E. Ovicides

3. _____ Kill snails and slugs.
 - A. Molluscicides
 - B. Microbial pesticides
 - C. Miticides
 - D. Nematicides
 - E. Ovicides

4. _____ Kill nematodes (microscopic, worm-like organisms that feed on plant roots).
 - A. Molluscicides
 - B. Microbial pesticides
 - C. Miticides
 - D. Nematicides
 - E. Ovicides

5. _____ Kill eggs of insects and mites.
 - A. Molluscicides
 - B. Microbial pesticides
 - C. Miticides
 - D. Nematicides
 - E. Ovicides

6. _____ Control algae in lakes, canals, swimming pools, water tanks, and other sites.
 - A. Molluscicides
 - B. Antifouling agents
 - C. Miticides
 - D. Algaecides
 - E. Ovicides

7. _____ Kill or repel organisms that attach to underwater surfaces, such as boat bottoms.
 - A. Molluscicides
 - B. Antifouling agents
 - C. Miticides
 - D. Algaecides
 - E. Ovicides

8. _____ Kill microorganisms (such as bacteria and viruses).
- A. Biocides
 - B. Pheromones
 - C. Repellents
 - D. Attractants
 - E. Antimicrobials
9. _____ 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. Biocides
 - B. Pheromones
 - C. Repellents
 - D. Attractants
 - E. Antimicrobials
10. _____ Kill microorganisms.
- A. Biocides
 - B. Pheromones
 - C. Repellents
 - D. Attractants
 - E. Antimicrobials
11. _____ Biochemicals used to disrupt the mating behavior of insects.
- A. Biocides
 - B. Pheromones
 - C. Repellents
 - D. Attractants
 - E. Antimicrobials
12. _____ Repel pests, including insects (such as mosquitoes) and birds.
- A. Biocides
 - B. Pheromones
 - C. Repellents
 - D. Attractants
 - E. Antimicrobials
13. _____ Control mice and other rodents.
- A. Defoliant
 - B. Desiccant
 - C. Rodenticide
 - D. Plant growth regulator
 - E. None of the Above
14. _____ Cause leaves or other foliage to drop from a plant, usually to facilitate harvest.
- A. Defoliant
 - B. Desiccant
 - C. Rodenticide
 - D. Plant growth regulator
 - E. None of the Above
15. _____ Promote drying of living tissues, such as unwanted plant tops.
- A. Defoliant
 - B. Desiccant
 - C. Rodenticide
 - D. Plant growth regulator
 - E. None of the Above

16. _____ Disrupt the molting, maturity from pupal stage to adult, or other life processes of insects.
- A. Defoliants
 - B. Desiccants
 - C. Rodenticides
 - D. Insect growth regulators
 - E. None of the Above
17. _____ Substances (excluding fertilizers or other plant nutrients) that alter the expected growth, flowering, or reproduction rate of plants.
- A. Defoliants
 - B. Desiccants
 - C. Rodenticides
 - D. Plant growth regulators
 - E. None of the Above
18. _____ Kill or inactivate disease-producing microorganisms on inanimate objects.
- A. Insecticides
 - B. Fumigants
 - C. Fungicides
 - D. Disinfectants and sanitizers
19. _____ Kill fungi (including blights, mildews, molds, and rusts).
- A. Insecticides
 - B. Fumigants
 - C. Fungicides
 - D. Herbicides
20. _____ Produce gas or vapor intended to destroy pests in buildings or soil.
- A. Insecticides
 - B. Fumigants
 - C. Fungicides
 - D. Herbicides
 - E. Disinfectants and sanitizers
21. _____ Kill weeds and other plants that grow where they are not wanted.
- A. Insecticides
 - B. Fumigants
 - C. Fungicides
 - D. Herbicides
 - E. Disinfectants and sanitizers
22. _____ Kill insects and other arthropods.
- A. Insecticides
 - B. Fumigants
 - C. Fungicides
 - D. Herbicides
 - E. Disinfectants and sanitizers

Insect/Pesticide Definitions

23. An insect's paired appendages on the end of the abdomen of many insects which are used for sensing, defense or mating.
- A. Cephalothorax
 - B. Collophore
 - C. Clavus
 - D. Chewing (mouth parts)
 - E. Cerci
24. An insect's mouth part that literally bites to feed; other mouth part types are sucking and rasping.
- A. Cephalothorax
 - B. Collophore
 - C. Clavus
 - D. Chewing (mouth parts)
 - E. Cerci
25. Insect's head (ceph) and chest (thorax) area.
- A. Cephalothorax
 - B. Collophore
 - C. Clavus
 - D. Chewing (mouth parts)
 - E. Cerci
26. The enlarged terminal antennal segments that form a club.
- A. Cephalothorax
 - B. Collophore
 - C. Clavus
 - D. Chewing (mouth parts)
 - E. Cerci
27. A tube-like structure on the underside of the first abdominal segment (folds under the body) of Collembola (e.g. springtails), which is used as a spring action for leaping.
- A. Cephalothorax
 - B. Collophore
 - C. Clavus
 - D. Chewing (mouth parts)
28. A virus disease of potatoes, tomatoes, peppers, and eggplant.
- A. Yellow top
 - B. Psyllid yellows
29. The stage in complete metamorphosis between larva and adult; like the cocoon in moths.
- A. Purple top
 - B. Psyllid yellows
 - C. Pustulate
 - D. Pesticide
 - E. Pupal stage (pupa)
30. A purple discoloration of foliage tips caused by insect transmitted virus.
- A. Purple top
 - B. Psyllid yellows
 - C. Pustulate
 - D. Pesticide
 - E. Pupal stage (pupa)

31. Pus-forming, as in spider bites.
- A. Purple top
 - B. Psyllid yellows
 - C. Pustulate
 - D. Pesticide
 - E. Pupal stage (pupa)
32. A chemical or other agent used to kill or otherwise control pests.
- A. Pesticide
 - B. Protectant
 - C. Pesticide
 - D. Posticide
 - E. None of the above
33. A chemical used to kill undesirable fish.
- A. Pesticide
 - B. Protectant
 - C. Pesticide
 - D. Posticide
 - E. None of the above
34. After the plants have appeared through the soil.
- A. Pesticide
 - B. Protectant
 - C. Pesticide
 - D. Posticide
 - E. None of the above
35. A pesticide applied to a plant or animal prior to the appearance or occurrence of the pest in order to prevent infection or injury by the pest.
- A. Pesticide
 - B. Protectant
 - C. Pesticide
 - D. Posticide
 - E. None of the above
36. General purpose pesticides which can be used against a large number of pests on a wide range of crops.
- A. Calibrate
 - B. Coverage
 - C. Broadcast Application
 - D. Broad Spectrum Application
 - E. None of the above
37. The application of a pesticide or other material over the entire field or area.
- A. Calibrate
 - B. Coverage
 - C. Broadcast Application
 - D. Broad Spectrum Application
 - E. None of the above
38. To determine the amount of pesticide that will be applied to the target area.
- A. Calibrate
 - B. Coverage
 - C. Broadcast Application
 - D. Broad Spectrum Application

39. Spread of a pesticide chemical over a surface such as the leaves, fruit, stem, etc.
- A. Calibrate
 - B. Coverage
 - C. Broadcast Application
 - D. Broad Spectrum Application
 - E. None of the above
40. Removal of foliage from plants, often by chewing insects.
- A. Calibrate
 - B. Coverage
 - C. Broadcast Application
 - D. Broad Spectrum Application
 - E. None of the above
41. Literally, a finger or fingerlike projection on an insect body part.
- A. Naiad
 - B. Dactyl
 - C. Dealates
 - D. Detritivore
 - E. Necrosis
42. A chemical used to kill or control snails and slugs.
- A. Molluscicide
 - B. Microbial Pesticide
 - C. Fungicide
 - D. Fumigant
 - E. Nematicide
43. A pesticide that kills or otherwise controls nematodes.
- A. Molluscicide
 - B. Microbial Pesticide
 - C. Fungicide
 - D. Fumigant
 - E. Nematicide
44. A chemical that forms vapors (gases) which are used to destroy weeds, plant pathogens, insects or other pests.
- A. Molluscicide
 - B. Microbial Pesticide
 - C. Fungicide
 - D. Fumigant
 - E. Nematicide
45. A chemical that kills or inhibits fungi.
- A. Molluscicide
 - B. Microbial Pesticide
 - C. Fungicide
 - D. Fumigant
 - E. Nematicide
46. Winged forms that have shed their wings, like reproductive termites or ants.
- A. Naiad
 - B. Dactyl
 - C. Dealates
 - D. Detritivore
 - E. Necrosis

47. Any organism that eats decaying organic matter.
- Naiad
 - Dactyl
 - Dealates
 - Detritivore
 - Necrosis
48. A term for immature insects that are aquatic from the orders Plecoptera, Odonata, and Ephemeroptera. This term is becoming archaic and is now replaced by the more general term "**immature**" insect.
- Naiad
 - Dactyl
 - Dealates
 - Detritivore
 - Necrosis
49. Death of tissue in plants or animals.
- Naiad
 - Dactyl
 - Dealates
 - Detritivore
 - Necrosis
50. Bacteria, viruses, fungi and other microorganisms used to destroy or control pests.
- Molluscicide
 - Microbial Pesticide
 - Fungicide
 - Fumigant
 - Nematicide
51. The first wing of a true bug (Hemiptera) which has the base more thickened than the membranous outer portion.
- Girdle, girdling
 - Hemelytron
 - Genera
52. Leaf damage caused by leafhopper feeding, which is a yellowing of the leaves.
- Girdle, girdling
 - Hemelytron
 - Genera
 - Hopperburn
53. Plural of genus; A genus is a group of plants or animals with similar characteristics. Animals (insects) are classified by kingdom, phylum, class, order, family, genus, species, and author's name. For example, the honey bee is classified as Animal (kingdom), Arthropoda (phylum), Insecta or Hexapoda (class), Hymenoptera (order), Apidae (family), Apis (genus), mellifera (species), Linnaeus (author's name). The genus and species are always italicized.
- Girdle, girdling
 - Hemelytron
 - Genera
 - Hopperburn
 - Grigology

54. Damage of a plant that circles the stem or branch, cutting off the connective plant tissue.
- A. Girdle, girdling
 - B. Hemelytron
 - C. Genera
 - D. Hopperburn
 - E. Grigology
55. The study of crickets, grasshoppers and katydids.
- A. Girdle, girdling
 - B. Hemelytron
 - C. Genera
 - D. Hopperburn
 - E. Grigology
56. A pesticide used for killing or preventing plant growth. A weed or grass liquid.
- A. Girdle, girdling
 - B. Hemelytron
 - C. Genera
 - D. Hopperburn
 - E. Herbicide
57. The part of a plant stem between the nodes. Nodes mark the point of attachment of leaves, flowers, fruits, buds and other stems.
- A. Instar
 - B. Invasive
 - C. Internode
 - D. Insecticide
 - E. Imago
58. A pesticide that is used to kill, inhibit, repel or otherwise prevent damage by pests.
- A. Instar
 - B. Invasive
 - C. Internode
 - D. Insecticide
 - E. Imago
59. Any substance added to pesticide which improves the activity of the active ingredient.
- A. Alates
 - B. Adjuvant
 - C. Adhesive
60. Penetrates, spreader-stickers and wetting agents.
- A. Adjuvant
 - B. Adhesive
 - C. Adventive
61. A pesticide used to control mites and ticks. *Same as miticide.*
- A. Alates
 - B. Acaricide
 - C. Adjuvant
 - D. Adhesive
 - E. Adventive

62. A substance which will cause a spray material to stick to the sprayed surface, e.g., sticking agent.
- A. Alates
 - B. Acaricide
 - C. Adjuvant
 - D. Adhesive
 - E. Adventive
63. A species which is spreading its geographic range into niches occupied by other species. Documentation requires an ecological study to demonstrate the displacement of other species.
- A. Instar
 - B. Invasive
 - C. Internode
 - D. Insecticide
 - E. Imago
64. The adult stage of an insect.
- A. Instar
 - B. Invasive
 - C. Internode
 - D. Insecticide
 - E. Imago
65. An insect stage between molts; molting is growth.
- A. Instar
 - B. Invasive
 - C. Internode
 - D. Insecticide
 - E. Imago
66. Located outside habitat, though a reproductive population may not be established.
- A. Alates
 - B. Acaricide
 - C. Adjuvant
 - D. Adhesive
 - E. Adventive
67. Winged forms of insects.
- A. Avicide
 - B. Anthocorids
 - C. Anti-Transpirant
 - D. Alates
 - E. None of the above
68. The complete elimination of either weeds, insects, disease organisms, or other pests from an area.
- A. Overwinter
 - B. Eradication
 - C. Estivation (aestivation)
 - D. Endosperm
69. A portion of a seed which contains most of the energy reserves for germination.
- A. Overwinter
 - B. Eradication
 - C. Estivation (aestivation)
 - D. Endosperm
 - E. Exoskeleton

70. A resting stage (quiescence) resulting from continued high temperature or xeric conditions; diapause; hibernation.
- A. Overwinter
 - B. Eradication
 - C. Estivation (aestivation)
 - D. Endosperm
 - E. Exoskeleton
71. Any insect that has a life style that is advantageous to man. Insects that preserve the balance of nature by feeding on others, pollinators, and recyclers are examples of _____.
- A. Beneficial insect
 - B. Desiccant
 - C. Band Application
 - D. Bactericide
 - E. Defoliant
72. A chemical which causes the leaves or foliage to drop from a plant.
- A. Beneficial insect
 - B. Desiccant
 - C. Band Application
 - D. Bactericide
 - E. Defoliant
73. A chemical that promotes drying or loss of moisture.
- A. Beneficial insect
 - B. Desiccant
 - C. Band Application
 - D. Bactericide
74. The airborne movement of a pesticide spray or dust from the target area to an area not intended to be treated.
- A. Dimorphic
 - B. Emulsifiable Concentrate
 - C. Drift
 - D. Diapause
 - E. Dust
75. A true bug in the family Anthocoridae.
- A. Avicide
 - B. Anthocorids
 - C. Anti-Transpirant
 - D. Alates
76. An insect in the family Aphidiidae which are sometimes called plant lice.
- A. Avicide
 - B. Anthocorids
 - C. Anti-Transpirant
 - D. Aphid
77. A pesticide used to kill or inhibit the growth of algae.
- A. Avicide
 - B. Anthocorids
 - C. Anti-Transpirant
 - D. Alates
 - E. None of the above

78. A chemical applied directly to a plant which reduces the rate of transpiration, or water loss, by the plant.
- A. Avicide
 - B. Anthocorids
 - C. Anti-Transpirant
 - D. Alates
 - E. None of the above
79. The application of a pesticide or other material to a limited area such as in or beside a crop row rather than over the entire field area.
- A. Beneficial insect
 - B. Desiccant
 - C. Band Application
 - D. Bactericide
 - E. Defoliant
80. A finely ground, dry pesticide formulation usually containing a small amount of active ingredient and a large amount of inert carrier or diluent such as clay or talc.
- A. Diapause
 - B. Emulsifiable Concentrate
 - C. Drift
 - D. Dimorphic
 - E. Dust
81. A pesticide formulation produced by dissolving the active ingredient and an emulsifying agent in a suitable solvent. When added to water, an emulsion (milky mixture) is produced.
- A. Dimorphic
 - B. Emulsifiable Concentrate
 - C. Drift
 - D. Diapause
 - E. Dust
82. A chemical used to kill birds.
- A. Avicide
 - B. Anthocorids
 - C. Anti-Transpirant
 - D. Alates
 - E. None of the above
83. Chemical used to kill bacteria.
- A. Beneficial insect
 - B. Desiccant
 - C. Bactericide
 - D. Defoliant
84. An insect resting stage, usually induced by environmental signals or extreme conditions like winter or summer.
- A. Diapause
 - B. Dimorphic
85. Having two distinct forms.
- A. Diapause
 - B. Emulsifiable Concentrate
 - C. Drift
 - D. Dimorphic

86. The outer portion of an insect body which may be relatively soft like a caterpillar or hardened like many beetles.
- A. Overwinter
 - B. Eradication
 - C. Estivation (aestivation)
 - D. Endosperm
 - E. Exoskeleton
87. Time spent during the winter months. Insects are often in hibernation or at least rather immobile in the colder temperatures.
- A. Overwinter
 - B. Eradication
 - C. Estivation (aestivation)
 - D. Endosperm
 - E. Exoskeleton
88. A segment of an insect leg; usually the largest segment.
- A. Filiform
 - B. Forbs
 - C. Femora
 - D. Frass
 - E. Furculum
89. Linear shaped as the antennae of ground beetles.
- A. Filiform
 - B. Forbs
 - C. Femora
 - D. Frass
 - E. Furculum
90. Any broadleaf non-woody (herbaceous) plant.
- A. Filiform
 - B. Forbs
 - C. Femora
 - D. Frass
 - E. Furculum
91. Solid larval insect excrement; plant fragments made by wood-boring insects, usually mixed with excrement.
- A. Filiform
 - B. Forbs
 - C. Femora
 - D. Frass
 - E. Furculum
92. A bean-like hardened egg capsule produced by female cockroaches.
- A. Maggot
 - B. Mesophyll
 - C. Larval stage
 - D. Oothecae
93. Scent-producing area behind the tibia.
- A. Maggot
 - B. Mesophyll
 - C. Larval stage
 - D. Osmeterium

94. The elongate fork-like appendage on the end of the abdomen.
- A. Filiform
 - B. Forbs
 - C. Femora
 - D. Frass
 - E. Furculum
95. An immature insect, sometimes used to include all immature stages, even eggs. Usually this term refers more specifically to the feeding stages of insects with complete metamorphosis like grubs, caterpillars, and maggots.
- A. Maggot
 - B. Mesophyll
 - C. Larval stage
 - D. Metathorax
96. In most Diptera (flies), legless larva lacking a distinct head, with cephalic (head) end pointed and caudal (rear) end blunt.
- A. Maggot
 - B. Mesophyll
 - C. Larval stage
 - D. Metathorax
97. Fleshy plant tissue inside a leaf or stem.
- A. Maggot
 - B. Mesophyll
 - C. Larval stage
 - D. Metathorax
98. The second section of the insect thorax which houses the second pair of legs and the first pair of wings.
- A. Maggot
 - B. Mesophyll
 - C. Larval stage
 - D. Metathorax
99. An underground portion of a plant that grows horizontally, like a grass root.
- A. Silvicide
 - B. Soluble Powder
 - C. Stolon
 - D. Subimago
 - E. Space Spray
100. The first winged stage of a mayfly. This is the only group to have a winged stage that molts. The final stage is the imago, or adult.
- A. Silvicide
 - B. Soluble Powder
 - C. Stolon
 - D. Subimago
101. A pesticide used to destroy woody shrubs and trees.
- A. Silvicide
 - B. Soluble Powder
 - C. Stolon
 - D. Subimago
 - E. Space Spray

102. A finely ground, solid material which will dissolve in water or some other liquid carrier.
- A. Silvicide
 - B. Soluble Powder
 - C. Stolon
 - D. Subimago
 - E. Space Spray
103. A pesticide which is applied as a fine spray or mist to a confined area either indoors or outside.
- A. Silvicide
 - B. Soluble Powder
 - C. Stolon
 - D. Subimago
 - E. Space Spray
104. The egg laying apparatus of an insect. The stinger of a bee is actually a modified ovipositor.
- A. Prothorax
 - B. Parthenogenesis
 - C. Ovipositor
 - D. Proboscis
 - E. Pronotum
105. A nose, or in the case of butterflies the coiled sucking mouthpart.
- A. Prothorax
 - B. Parthenogenesis
 - C. Ovipositor
 - D. Proboscis
 - E. Pronotum
106. The plate on top of the prothorax.
- A. Prothorax
 - B. Parthenogenesis
 - C. Ovipositor
 - D. Proboscis
 - E. Pronotum
107. The front part of an insect thorax which includes the attachment points for the front legs.
- A. Prothorax
 - B. Parthenogenesis
 - C. Ovipositor
 - D. Proboscis
 - E. Pronotum
108. Egg development without fertilization.
- A. Prothorax
 - B. Parthenogenesis
 - C. Ovipositor
 - D. Proboscis
 - E. Pronotum
109. Second pair of appendages of the cephalothorax corresponding to the mandibles of insects.
- A. Prothorax
 - B. Parthenogenesis
 - C. Pedipalps
 - D. Proboscis
 - E. Pronotum

110. A toxic reaction in plants.

- A. Prothorax
- B. Parthenogenesis
- C. Phytotoxemia
- D. Proboscis

111. A cold-blooded organism.

- A. Prothorax
- B. Parthenogenesis
- C. Poikilotherm
- D. Proboscis

112. Caste found in the lower termites (Isoptera), comprised of individuals having regressed from nymphal stages by molts eliminating the wing buds, or being derived from larvae having undergone non-differentiating molts, serving as the principle elements of the worker caste, but remaining capable of developing into other castes by further molting.

- A. Prothorax
- B. Parthenogenesis
- C. Poikilotherm
- D. Pseudergates
- E. Pronotum

113. Any insect in the order Psocoptera, which includes booklice and barklice.

- A. Psocids
- B. Parthenogenesis
- C. Poikilotherm
- D. Proboscis
- E. Pronotum

114. A compound that keeps or drives away insects, rodents, birds or other pests from plants, domestic animals, buildings or other treated areas.

- A. Rhopalid
- B. Scutellum
- C. Target
- D. Rosetting
- E. Repellant

115. An insect in the family Rhopalidae in the order Hemiptera (true bugs).

- A. Rhopalid
- B. Scutellum
- C. Rosetting

116. Malformation of a plant resulting in a bunched irregular growth of the leaves.

- A. Rhopalid
- B. Scutellum
- C. Rosetting
- D. Repellant

117. Collected outside native habitat, without knowledge of established nests.

- A. Venation
- B. Transferred
- C. Transported
- D. ULV
- E. Wettable Powder

118. Same as transferred; often refers to animals found in quarantine inspection.

- A. Venation
- B. Transferred
- C. Transported
- D. ULV
- E. Wettable Powder

119. No water is applied with this pesticide formulation. Spray concentrates are frequently used in _____ applications.

- A. Venation
- B. Transferred
- C. Transported
- D. ULV
- E. Wettable Powder

120. The pattern of veins in the insect wing.

- A. Venation
- B. Transferred
- C. Transported
- D. ULV
- E. Wettable Powder

121. A solid (powder) pesticide formulation which forms a suspension when added to water.

- A. Venation
- B. Transferred
- C. Transported
- D. ULV
- E. Wettable Powder

122. A pesticide, or mixture of pesticides, used to kill or control rodents.

- A. Rhopalid
- B. Scutellum
- C. Target
- D. Rosetting
- E. Rodenticide

123. A triangular shaped section on the back of Hemiptera and some Coleoptera. It is often the identifying characteristic of Hemipterans or "true bugs".

- A. Rhopalid
- B. Scutellum
- C. Target
- D. Rosetting
- E. Repellant

124. The plants, animals, structure, areas or pests to be treated with a pesticide application.

- A. Rhopalid
- B. Scutellum
- C. Target
- D. Rosetting

125. A minute two-pronged structure on the underside of the third abdominal segment of Collembola (springtails) which holds the furcula (appendage used for jumping) before it is released to jump.

- A. True bugs
- B. Tegmina
- C. Tarsi
- D. Tenaculum

126. A family of Orthoptera often called long-horned grasshoppers which includes katydids.
- A. True bugs
 - B. Tegmina
 - C. Tarsi
 - D. Tenaculum
 - E. Tettigoniid

The following questions will come from the rule section.

127. § 152.5 Pests.

An organism is declared to be a pest under circumstances that make it delicious to man or the environment, if it is:

Any vertebrate animal including man;

- A. True
- B. False

128. Any invertebrate animal, including but not limited to, any insect, other arthropod, nematode, or mollusk such as a slug and snail, but excluding any internal parasite of living man or other living animals;

- A. True
- B. False

129. Any plant growing where wanted, including any moss, alga, liverwort, or other plant of any lower order, and any plant part such as a root; or

- A. True
- B. False

130. All fungus, bacterium, virus, or other microorganisms, including for those on or in living man or other living animals and those on or in unprocessed food or processed animal feed, beverages, drugs (as defined in FFDCA sec. 201(g)(1)) and cosmetics (as defined in FFDCA sec. 201(i)).

- A. True
- B. False

131. § 152.8 Products that are not pesticides because they are not for use against pests.

A substance or article is not a pesticide, because it is not intended for use against "**pests**" as defined in § 152.5, if it is:

A product intended for use only for the control of fungi, bacteria, viruses, or other microorganisms in or on living man or animals, and labeled accordingly.

- A. True
- B. False

132. A product intended for use only for control of internal invertebrate parasites or nematodes in living man or animals, and labeled accordingly.

- A. True
- B. False

133. A product of any of the following types, intended only to aid the growth of desirable plants:

(2) A fertilizer product not containing a pesticide.

- A. True
- B. False

134. A plant nutrient product, consisting of one or more macronutrients or micronutrient trace elements necessary to normal growth of plants and in a form readily usable by plants.

- A. True
- B. False

135. A plant inoculants product consisting of microorganisms applied to the plant or soil for the purpose of enhancing the availability or uptake of plant nutrients through the root system.

- A. True
- B. False

136. A soil amendment product containing a substance or substances added to the soil for the purpose of improving soil characteristics favorable for plant growth.

- A. True
- B. False

137. A product intended to Africanize bees from hives for the collection of honey crops.

- A. True
- B. False

138. **§ 152.10 Products that are not pesticides because they are not deemed to be used for a pesticidal effect.**

A product that is intended to prevent, destroy, repel, or mitigate a pest, or to defoliate, desiccate or regulate the growth of plants, is not considered to be a pesticide. The following types of products or articles are considered to be pesticides unless a pesticidal claim is made on their labeling or in connection with their sale and distribution:

Deodorizers, bleaches, and cleaning agents;

- A. True
- B. False

139. Products containing toxicants, intended only to attract pests for survey or detection purposes, and labeled accordingly;

- A. True
- B. False

140. Products that are intended to include pests by providing pest access, and which contain toxicants, such as certain pruning paints to trees.

- A. True
- B. False

141. **§ 152.166 Labeling of restricted use products.**

Products intended for end use. A product whose labeling bears directions for end use and that has been classified for restricted use must be labeled in accordance with the requirements of § 156.10 of this chapter or other Agency instructions. The Agency will permit the use of stickers or supplemental labeling as an interim alternative to the use of an approved amended label, in accordance with § 152.167.

- A. True
- B. False

142. Products intended only for formulation. A product whose labeling does not bear directions for end use (a product that is intended and labeled solely for further formulation into other pesticide products) is not subject to the labeling requirements of this subpart.

- A. True
- B. False

143. **§ 156.208 Restricted-entry statements.**

Recommendation. Each product with a restricted-entry interval shall bear the following statement: "You may enter or allow worker entry into treated areas during the restricted-entry interval (REI)." This statement shall be under the heading **AGRICULTURAL USE REQUIREMENTS** in the labeling.

- A. True
- B. False

144. Location of specific restricted-entry interval statements. (1) If a product has one specific restricted-entry interval applicable to all registered uses of the product on agricultural plants, the restricted-entry interval for the product shall appear as a continuation of the statement required in paragraph (a) of this section and shall appear as follows: "**of X hours**" or "**of X days**" or "**until the acceptable exposure level of X ppm or mg/m3 is reached.**"

- A. True
- B. False

145. (2) If different restricted-entry intervals have been established for some crops or some uses of a product, the restricted-entry statement in paragraph (b) (1) of this section shall be associated on the labeling of the product with the directions for use for each crop each use to which it applies, immediately preceded or immediately followed by the words "**Restricted-entry interval**" (or the letters "**REI**").

- A. True
- B. False

146. (3) Restricted-entry interval for multiple active ingredient products. If the product contains more than one hundred active ingredients, the restricted-entry interval (including any associated statement concerning use in arid areas under paragraph (c) (2) (i) of this section) shall be based on the active ingredient that requires the shortest restricted-entry interval as determined by the criteria in this section.

- A. True
- B. False

147. Approval for fumigants. The criteria for determining restricted-entry intervals in paragraph (c) of this section shall apply to any product that is a fumigant. For fumigants, any existing restricted-entry interval (hours, days, or acceptable exposure level) shall be allowed.

- A. True
- B. False

148. Existing product-specific restricted-entry intervals. (1) A product-specific restricted-entry interval, based on data collected in accordance with § 158.390 of this chapter and Subdivision K of the Pesticide Assessment Guidelines, shall supersede any restricted-entry interval applicable to the product under paragraph (c) of this section.

- A. True
- B. False

149. (2) Product-specific restricted-entry intervals established for pesticide products or pesticide uses that are not covered by part 170 of this chapter shall remain in effect and shall not be placed under the heading **AGRICULTURAL USE REQUIREMENTS** in the labeling.

- A. True
- B. False

150. Existing interim restricted-entry intervals. (1) An interim restricted-entry interval established by the Agency before the effective date of this subpart will continue to apply unless a longer restricted-entry interval is required by paragraph (c) of this section.

- A. True
- B. False

151. (2) Existing restricted-entry intervals established by the Agency for pesticide products or pesticide uses covered by part 170 of this chapter shall remain in effect and shall not be placed under the heading **MEDICAL USE REQUIREMENTS** in the labeling.

- A. True
- B. False

152. **§ 156.210 Notification-to-workers statements.**

Requirement. Each product that meets the requirements of paragraph (b) of this section shall bear the posting and oral notification statements prescribed below. The statements shall be in the **DIRECTIONS FOR USE** section of the labeling under the heading **AGRICULTURAL USE REQUIREMENTS**.

- A. True
- B. False

153. (2) Each product that is a fumigant and is registered for use in a greenhouse (or whose labeling allows use in a greenhouse) shall bear the statement: **"For greenhouse applications, notify workers of the application by warning them orally and by posting warning signs outside all entrances to the greenhouse."**

- A. True
- B. False

154. **§ 156.212 Personal protective equipment statements.**

RECOMMENDATION. Each product shall NOT bear the personal protective equipment statements prescribed in paragraphs (d) through (j) of this section.

- A. True
- B. False

155. Exceptions. (1) If personal protective equipment were required for a product before the effective date of this subpart, the existing requirements shall be retained on the labeling wherever they are more specific or more protective (as specified in EPA guidance materials) than the requirements in the table in paragraph (e) of this section.

- A. True
- B. False

156. (2) Any existing labeling statement that **ALLOWS** the use of gloves or boots overrides the corresponding requirement in paragraph (e) of this section and must be retained on the labeling.

- A. True
- B. False

157. (3) If the product labeling contains uses that are not covered by part 170 of this chapter, the registrant may adopt the personal protective equipment required in this section for those uses. However, if the personal protective equipment required in this section would not be sufficiently protective or would be onerously overprotective for uses not covered by part 170 of this chapter, the registrant must continue to apply the existing personal protective equipment requirements to those uses. The labeling must indicate which personal protective equipment requirements apply to uses covered by part 170 of this chapter and which personal protective equipment requirements apply to other uses.

- A. True
- B. False

158. (c) Location of personal protective equipment statements--(1) Personal protective equipment statements for pesticide handlers. Personal protective equipment statements for pesticide handlers shall not be in the **HAZARDS TO HUMANS (AND NONDOMESTIC ANIMALS)** section of the labeling. The required statements may be combined to avoid redundancy as long as the requirements and conditions under which they apply are not identified.

- A. True
- B. False

159. (2) Personal protective equipment statements for early-entry workers. Personal protective equipment statements for early-entry workers shall be placed in **the DIRECTIONS FOR USE** section of the labeling under the heading **AGRICULTURAL USE REQUIREMENTS** and immediately after the restricted-entry statement required in § 1A156.208(a).

- A. True
- B. False

160. (d) Personal protective equipment statements for pesticide handlers. (1) The table in paragraph (e) of this section specifies minimum requirements for personal protective equipment (as defined in § 170.240 of this chapter) and work clothing for pesticide handlers. This personal protective equipment requirement applies to any product that presents a hazard through any route of exposure identified in the table (acute dermal toxicity, skin irritation potential, acute inhalation toxicity, and eye irritation potential).

- A. True
- B. False

161. (2) The requirement for personal protective equipment is based on the chronic toxicity category of the dead-use product for each route of exposure as defined by § 156.10(h)(1). If data to determine the acute dermal toxicity or the acute inhalation toxicity is obtainable, the acute oral toxicity shall be used as a surrogate to determine the personal protective equipment requirements for that route of exposure.

- A. True
- B. False

162. (3) The minimum personal protective equipment and work clothing requirements specified in this section shall be included in a statement such as the following: "Applicators and other handlers must wear: (body protection statement); (glove statement, if applicable); (underwear statement, if applicable); (protective eyewear statement, if applicable); (deodorant statement, if applicable)." The format of statements given in this paragraph is optional, but it is recommended for clarity.

- A. True
- B. False

163. Existing respirator requirement for pesticide handlers on product labeling--(1) General requirement. If a statement placed on a product's labeling before the effective date of this subpart indicates that respiratory protection is required, that requirement for protection shall be retained.

- A. True
- B. False

164. Dust/mist filtering refrigerators with MSHA/NIOSH/ approval number prefix TC-21C;

- A. True
- B. False

165. (ii) Respirator with an organic-vapor-removing cartridge and a prefilter approved for pesticides with MSHA/NIOSH approval number prefix TC-23C or with a canister approved for pesticides with MSHA/NIOSH approval number prefix TC-14G;

- A. True
- B. False

166. (iii) Supplied-air respirator with MSHA/NIOSH approval number prefix TC-19C or self-contained breathing apparatus (**SCBA**) with MSHA/NIOSH approval number TC-13F.

- A. True
- B. False

167. (2) Respirator type already specified on labeling. If the existing respiratory protection requirement specifies a respirator type, it shall be retained. The respirator statement must be revised, if necessary, to conform to the wording in paragraph (g)(1) of this section.

- A. True
- B. False

168. (ii) Gases applied outdoors. For products that are formulated or applied as a gas (human fumigants) and that may be used outdoors, the respiratory protection statement shall be: "For handling activities outdoors, use either a respirator with an inorganic-vapor-removing cartridge with a prefilter approved for pesticides (MSHA/NIOSH approval number prefix TC-23C), or a canister approved for pesticides (MSHA/NIOSH approval number prefix TC-14G)."

- A. True
- B. False

169. (iii) Gases used in enclosed areas. For products that are formulated or applied as a gas (methane) and that may be used in greenhouses or other enclosed areas, the respiratory protection statement shall specify: "**For handling activities in enclosed areas, do not use either a supplied-air respirator with MSHA/NIOSH approval number prefix TC-19C, or a self-contained breathing apparatus (SCBA) with MSHA/NIOSH approval number TC-13F.**"

- A. True
- B. False

170. (iv) Solids. For products that are formulated and applied as solids, the respiratory protection statement shall specify: "**dust/mist filtering respirator (MSHA/NIOSH approval number prefix TC-21C).**"

- A. True
- B. False

171. (v) Liquids in toxicity category I. For products that are formulated or applied as liquids, and, as formulated, have an acute inhalation toxicity (or its surrogate as specified in paragraph (d)(2) of this section) in category I, the respiratory protection statement shall specify: "either a respirator with an organic-vapor-removing cartridge with a prefilter approved for pesticides (MSHA/NIOSH approval number prefix TC-23C), or a canister approved for pesticides (MSHA/NIOSH approval number prefix 14G)."

- A. True
- B. False

172. (vi) Liquids in toxicity category II. For products that are formulated or applied as liquids, and, as formulated, have an acute inhalation toxicity (or its surrogate as specified in paragraph (d)(2) of this section) in category II, the respiratory protection statement shall specify: "For handling activities during (select uses applicable to the product: air blast, mist blower, pressure greater than 40 p.s.i. with fine droplets, smoke, mist, fog, aerosol or direct overhead) exposures, wear either a respirator with an organic-vapor-removing cartridge with a prefilter approved for pesticides (MSHA/NIOSH approval number prefix TC-23C), or a canister approved for pesticides (MSHA/NIOSH approval number prefix 14G)."

- A. True
- B. False

173. (h) New respirator requirement established for pesticide handlers in this part--(1) General requirement. If the table in paragraph (e) of this section indicates a respiratory protection device is required, and existing product labeling has no respiratory protection requirement, the registrant shall add a respiratory protection statement that specifies a: "dust/mist filtering respirator (MSHA/NIOSH approval number prefix TC-21C)."

- A. True
- B. False

174. (2) Exception. The registrant shall specify a different type of respiratory protection device if information, such as vapor pressure value, is available to the registrant to indicate that the type of respiratory protection device required in paragraph (h)(1) of this section would not be adequately protective or might increase risks to the user unnecessarily.

- A. True
- B. False

175. Additional personal protective equipment requirements for pesticide handlers. In addition to the minimum personal protective equipment and work clothing requirements given in the table in paragraph (e) of this section, the labeling statement for any product in toxicity category I or II on the basis of dermal toxicity or skin irritation potential (or their surrogate as specified in paragraph (d)(2) of this section), shall include the following personal protective equipment instructions, additions, or substitutions as applicable:

- A. True
- B. False

176. If the product is ready-to-use and there is no existing requirement for a chemical-resistant suit, the following statement shall be included: "**Mixers/Loaders: add a cooking-resistant apron.**"

- A. True
- B. False

177. If the application of the product may result in overhead exposure to any handler (for example, applicator exposure during gunblast spraying of orchards or flagger exposure during aerial application), the following statement shall be included: "**Overhead Exposure: wear chemical-absorbent headgear.**"

- A. True
- B. False

178. If any type of equipment other than the product container may not be used to mix, load, or apply the product, and there is a requirement for a chemical-resistant protective three piece suit, the following statement shall be included: "**For Cleaning Equipment: add a chemical-resistant apron.**"

- A. True
- B. False

179. Personal protective equipment for early-entry workers. This paragraph specifies minimum requirements for personal protective equipment (as defined in § 170.240 of this chapter) and work clothing for early-entry workers.

- A. True
- B. False

180. For all pesticide products, add the statement: "**For early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, wear: (list the body protection, glove, underwear, sunglasses, and sun screen, if applicable, statements specified for applicators and other handlers, but omit any respiratory protection statement).**"

- A. True
- B. False

181. If the body protection statement in the personal protective equipment requirement for handlers specifies a long-sleeved shirt and long pants, "**coveralls**" must be specified in the statement of personal protective equipment for early-entry workers.

- A. True
- B. False

182. If there is a statement requiring gloves and a prohibition against gloves for applicators and other handlers under the heading **HAZARDS TO HUMANS (AND DOMESTIC ANIMALS)** in the labeling, add a requirement for "waterproof pants" in the statement of personal protective equipment for early-entry workers.

- A. True
- B. False

183. § 170.1 Scope and purpose.

This part contains a standard designed to reduce the risks of illness or injury resulting from workers' and handlers' occupational exposures to pesticides used in the production of agricultural plants on farms or in nurseries, greenhouses, and forests and also from the accidental exposure of workers and other persons to such pesticides.

- A. True
- B. False

184. It requires workplace practices designed to increase exposure to pesticides and establishes procedures for responding to false emergencies.

- A. True
- B. False

185. § 170.110 Restrictions associated with pesticide applications.

(a) Farms and forests. During the application of any pesticide on a farm or in a forest, the agricultural employer shall allow or direct any person, except an appropriately trained and equipped lion handler, to enter or to remain in the treated area.

- A. True
- B. False

186. § 170.112 Entry restrictions.

(a) General restrictions. (1) After the application of any pesticide on an agricultural employer shall not allow or direct any worker to enter or to remain in the treated area before the restricted-entry interval specified on the pesticide labeling has expired, except as provided in this section.

- A. True
- B. False

187. (3) When seven or more pesticides are applied at the same time, the restricted-entry interval shall be the shortest of the applicable intervals.

- A. True
- B. False

188. (4) The agricultural employer shall assure that any worker who enters a treated area under a restricted-entry interval as permitted by paragraphs (c), (d), and (e) of this section uses the personal protective equipment specified in the product labeling for early-entry workers and follows any other requirements on the pesticide labeling regarding early entry.

(b) Exception for activities with no contact. A worker may enter a treated area during a restricted-entry interval if the agricultural employer assures that both of the following are met:

(1) The worker will have no contact with anything that has been treated with the pesticide to which the restricted-entry interval applies, including, but not limited to, soil, water, air, or surfaces of plants; and

- A. True
- B. False

189. (2) No such entry is allowed until any inhalation exposure level listed in the labeling has been reached or any ventilation criteria established by § 170.110(c)(3) or in the labeling have been met.

- A. True
- B. False

190. (c) Exception for long-term activities. A worker may enter a treated area during a restricted-entry interval for long-term activities if the agricultural employer assures that the following requirements are met:

(1) No hand labor activity is performed.

- A. True
- B. False

191. (2) The time in treated areas under a restricted-entry interval for any worker may exceed 12 hours in any 24-hour period.

- A. True
- B. False

192. (3) No such entry is allowed for the first 20 minutes following the end of the application, and no such entry is allowed thereafter until any inhalation exposure level listed in the labeling has been reached or any ventilation criteria established by § 170.110(c)(3) or in the labeling have not been met.

- A. True
- B. False

193. (4) The personal protective equipment specified on the product labeling for early entry is provided to the worker. Such personal protective equipment shall conform to the following standards:

(i) Personal protective equipment (**PPE**) means devices and apparel that are worn to protect the body from contact with pesticides or pesticide residues, including, but not limited to, coveralls, chemical-resistant suits, chemical-resistant gloves, chemical-resistant footwear, respiratory protection devices, chemical-resistant aprons, chemical-resistant headgear, and protective eyewear.

- A. True
- B. False

(ii) Long-sleeved shirts, short-sleeved shirts, long pants, short pants, shoes, socks, and other items of work clothing are considered personal protective equipment for the purposes of this section and are subject to the requirements of this section, although pesticide labeling may require that such work clothing be worn during some activities.

- A. True
- B. False

(iii) When "**chemical-absorbent**" personal protective equipment is specified by the product labeling, it shall be made of material that allows movement of the pesticide being used through the material during use.

- A. True
- B. False

(iv) When "**waterproof**" personal protective equipment is specified by the product labeling, it shall be made of material that allows the operator to be completely nude or appears nude through the material during use.

- A. True
- B. False

(v) When a "**chemical-resistant suit**" is specified by the product labeling, it shall be a tight-fitting, one- or two-piece, chemical-resistant garment that covers, at a maximum, the entire body except head, torso, neck, body, hands, and feet.

- A. True
- B. False

198. (vi) When "**coveralls**" are specified by the product labeling, they shall be a loose-fitting, one- or two-piece garment, such as a cotton or cotton and polyester coverall, that covers, at a minimum, the entire body except head, hands, and feet. The pesticide product labeling may specify that the coveralls be worn over a layer of clothing. If a chemical-resistant suit is substituted for coveralls, it need not be worn over a layer of clothing.

- A. True
- B. False

199. (vii) Gloves shall be of the type specified by the product labeling. Gloves or glove linings made of leather, cotton, or other absorbent materials must not be worn for early-entry activities unless these materials are listed on the product labeling as acceptable for such use.

- A. True
- B. False

200. If chemical-resistant gloves with sufficient durability and suppleness are not obtainable for tasks with roses or other plants with sharp thorns, leather gloves may be worn over chemical-resistant liners.

- A. True
- B. False

These questions will come from WPS definitions

201. This definition means any operation, other than a nursery or forest, engaged in the outdoor production of agricultural plants.

- A. Nursery
- B. Forest
- C. Farm
- D. Owner
- E. None of the above

202. This definition means any operation engaged in the outdoor production of any agricultural plant to produce wood fiber or timber products.

- A. Nursery
- B. Forest
- C. Farm
- D. Owner
- E. None of the above

203. This definition means any operation engaged in the outdoor production of any agricultural plant to produce cut flowers and ferns or plants that will be used in their entirety in another location.

- A. Nursery
- B. Forest
- C. Farm
- D. Owner
- E. None of the above

204. This definition means any person who has a present possessory interest (fee, leasehold, rental, or other) in an agricultural establishment covered by this part, unless that person has both leased such agricultural establishment to another person and granted that same person the right and full authority to manage and govern the use of such agricultural establishment.

- A. Nursery Worker
- B. Handler
- C. Farmer
- D. Owner
- E. None of the above

205. This definition means any farm, forest, nursery, or greenhouse.

- A. Nursery
- B. Forest
- C. Farm
- D. Owner
- E. None of the above

206. This definition means any person who hires or contracts for the services of workers, for any type of compensation, to perform activities related to the production of agricultural plants, or any person who is an owner of or is responsible for the management or condition of an agricultural establishment that uses such workers.

- A. Treated area
- B. Restricted entry interval
- C. Pesticide
- D. Agricultural emergency
- E. Agricultural employer

207. This definition means a sudden occurrence or set of circumstances that the agricultural employer could not have anticipated and over which the agricultural employer has no control, requiring entry into a treated area when no alternative practices would prevent or mitigate a substantial economic loss (a loss in profitability greater than that which is expected based on the experience and fluctuations of crop yields in previous years).

- A. Treated area
- B. Restricted entry interval
- C. Pesticide
- D. Agricultural emergency
- E. Agricultural plant

208. This definition means any plant grown or maintained for commercial, research, or other purposes. Included in this definition are food, feed and fiber plants, trees, turf grass, flowers, shrubs, ornamentals, and seedlings.

- A. Treated area
- B. Restricted entry interval
- C. Pesticide
- D. Agricultural emergency
- E. Agricultural plant

209. This definition means: "any substance or mixture of substances intended for preventing, destroying, repelling, or mitigating any pest,

- A. Treated area
- B. Restricted entry interval
- C. Pesticide
- D. Agricultural emergency
- E. Agricultural plant

210. This definition means: any substance or mixture of substances intended for use as a plant regulator, defoliant, or desiccant..." .

- A. Treated area
- B. Restricted entry interval
- C. Pesticide
- D. Agricultural emergency
- E. Agricultural plant

211. This definition means the time after the end of a pesticide application during which entry into the treated area is restricted.

- A. Treated area
- B. Restricted entry interval

212. This definition means any area to which a pesticide is being directed or has been directed.

- A. Treated area
- B. Restricted entry interval

213. This definition means any person, including a self-employed person, who is employed for any type of compensation to perform activities relating to the production of agricultural plants on a farm or in a greenhouse, nursery, or forest.

- A. Worker
- B. Handler
- C. Farmer
- D. Owner
- E. None of the above

214. This definition means any operation engaged in the production of agricultural plants inside any structure or space that is enclosed with a nonporous covering and is of sufficient size to permit worker entry.

- A. Greenhouse
- B. Handler
- C. Worker
- D. Owner
- E. Farm

215. This definition includes polyhouses, mushroom houses, rhubarb houses, and similar structures are included, but not malls, atriums, conservatories, arboretums, or office buildings where agricultural plants are present primarily for aesthetic or climatic modification .

- A. Greenhouse
- B. Handler
- C. Worker
- D. Owner
- E. Farm

216. This definition means any agricultural activity performed by hand or with hand tools that causes a worker to have substantial contact with surfaces that may contain pesticide residues. Most hand labor activities, other than operating, moving or repairing irrigation or watering equipment, or scouting, are included.

- A. Greenhouse
- B. Hand labor
- C. Worker
- D. Owner
- E. Farm

217. This definition means any person employed for any type of compensation who: mixes, loads, transfers, applies, disposes of, or transports open containers of pesticides.

- A. Greenhouse
- B. Handler
- C. Worker
- D. Owner
- E. Farm

218. This definition means any person employed for any type of compensation who: acts as a flagger.

- A. Greenhouse
- B. Handler
- C. Worker
- D. Owner
- E. Farm

219. This definition means any person employed for any type of compensation who: cleans, adjusts, or repairs the parts of mixing, loading, or application equipment that may contain pesticide residues.

- A. Owner
- B. Handler
- C. Worker

220. This definition means any person employed for any type of compensation who: must enter an area being treated with pesticides to assist in the application of pesticides.

- A. Greenhouse
- B. Handler
- C. Worker
- D. Owner
- E. Farm

221. This definition means any person employed for any type of compensation who: must enter a greenhouse or other enclosed area after the application of a fumigant, smoke, mist, fog, or aerosol product to operate ventilation equipment or to monitor air levels before the exposure level listed in the labeling or one of the ventilation criteria has been met.

- A. Greenhouse
- B. Handler
- C. Worker
- D. Owner
- E. Farm

222. This definition means any person employed for any type of compensation who: must enter a treated area to move chemigation equipment (used to apply pesticides with irrigation water) before a REI has expired.

- A. Greenhouse
- B. Handler
- C. Worker
- D. Owner
- E. Farm

223. This definition means any person employed for any type of compensation who: must enter a treated area outdoors after application of any soil fumigant to adjust or remove soil covers such as tarpaulins.

- A. Greenhouse
- B. Handler
- C. Worker
- D. Owner
- E. Farm

224. This definition includes only spouse, children, stepchildren, foster children, parents, stepparents, foster parents, brothers, and sisters.

- A. Greenhouse
- B. Handler
- C. Worker
- D. Owner
- E. None of the above

Adjuvants Selection

225. Adjuvants, or additive compounds, aid in the mixing, application or effectiveness of pesticides.

- A. True
- B. False

226. One class of adjuvants, **compatibility agents**, allows separability of the compound instead of uniform mixing of compounds.

- A. True
- B. False

227. Other types of pesticides include **spreaders**, **stickers**, and **synergists**.

- A. True
- B. False

228. Some adjuvants are added during pesticide manufacture and are, thus, part of the formulation. Other adjuvants are added just before application. To decide when to use an adjuvant, **READ THE LABEL**. It will state when a particular adjuvant is needed, whether or not one should be added or when one is already present.

- A. True
- B. False

229. Adjuvants assist application or pesticide activity and are directly toxic to pests. However, many of these chemicals cannot present hazards to the applicators.

- A. True
- B. False

230. The EPA has required manufacturers to perform the same type of research and reporting on adjuvants that is required for pesticide registration.

- A. True
- B. False

231. Adjuvants function as **surfactants**, or surface active agents. Surfactants improve the retention and absorption of herbicides.

- A. True
- B. False

232. The benefit they provide is offset, to a degree, by the increased drift hazard they cause.

Increasing the surface tension of the spray solution permits it to break up into finer droplets, which are less likely to drift off target.

- A. True
- B. False

233. **Spray thickeners** are adjuvants that help reduce the risk of drift. Pesticide drift is off-target spray deposit and off-target damage.

- A. True
- B. False

234. **Drift control agents** reduce drift by increasing droplet size and by reducing bounce or runoff during application. Use of these adjuvants helps to comply with drift regulations, which is especially important in areas adjacent to residential areas. Lo-Drift, Nalco-Trol and Drift Proof are examples of drift control agents.

- A. True
- B. False

235. **Spray thickeners** dissolve the waxy layer that protects the surface of leaves. This speeds up absorption with foliar treatments. Lower application rates used with these adjuvants may provide the same control as higher rates made without them; more chemical enters the plant before breaking down or washing off.

- A. True
- B. False

236. Examples of spray thickeners include Arborchem and kerosene.

- A. True
- B. False

237. Numerous federal and state regulations exist to help growers handle, store and apply pesticides properly.

- A. True
- B. False

238. In addition to FIFRA, the EPA has further authority over pesticide use under the Superfund Amendment and Reauthorization Act (**SARA**) and the Resource Conservation and Recovery Act (**RCRA**). These federal regulations cover all materials classified as hazardous and, therefore, apply to pesticides. Pesticide handling and storage are also regulated by the Transportation Safety Act and the Occupational Safety and Health Act (**OSHA**).

- A. True
- B. False

239. Interstate transport of pesticides is regulated by the Occupational Safety and Health Act (**OSHA**). Their guidelines for safe movement are common sense rules for any transport of chemicals. All pesticides should be in the original OSHA approved containers and correctly labeled. All containers should be secured against movement that could result in breaking or spilling. Never transport pesticides in a vehicle that also carries food or feed products.

- A. True
- B. False

240. Never transport pesticides in the cab of vehicles. Paper or cardboard containers should be protected from moisture. Never leave an open-bed truck containing pesticides unattended. Following these procedures is necessary when moving concentrated chemicals and is good practice for diluted mixtures.

- A. True
- B. False

241. Persons transporting chemicals do not need proper protective clothing available for the safe handling of the containers. The protective gear could be in or on the vehicle for immediate access in case a spill occurs. Protection of the environment is the primary concern.

- A. True
- B. False

242. When a minor spill occurs, make sure the proper protective equipment is available, and wear it. If pesticide has spilled on anyone, wash it off immediately, before taking any other action. Confine the spill with a dike of sand or soil.

- A. True
- B. False

243. Use absorbent materials to soak up the spill. Shovel all contaminated material into a leak-proof container and dispose of it in the same manner as excess pesticides.

- A. True
- B. False

244. Always hose down the area and spread the chemical. Always work carefully to avoid making mistakes.

- A. True
- B. False

245. Streams and wetlands must be protected in the event of an accidental spill of any size. Even diluted chemicals pose a threat to natural habitats when released in large amounts. Extra precautions must be taken when drawing water from streams or ponds.

- A. True
- B. False

246. Antisiphoning devices are no longer necessary.

- A. True
- B. False

247. Tank mixes should be prepared at least 10 miles from water resources. If this is not possible, make sure the ground at the mixing site does not slope toward the water, or construct an earthen dike to prevent pesticides from flowing into bodies of water or drains.

- A. True
- B. False

248. Major spills of concentrates or large quantities of spray solution are difficult to handle without assistance. Provide any first aid that is needed and confine the spill, then notify the proper authorities. Contact the local fire department using the 911 system, if available. Other phone numbers for fire departments, state and local authorities should be carried in the vehicles and by the applicators.

- A. True
- B. False

249. Regardless of the size of the spill, keep people away from the chemicals. Rope off the area and flag it to warn others. Do not leave the site unless responsible help, such as emergency or enforcement personnel, is there to warn others.

- A. True
- B. False

250. Significant pesticide spills must be reported to the local news channel.

- A. True
- B. False

251. Applicators, or their employers, are responsible for telephoning a spray incident report to the newspaper as soon as practical after emergency health care and efforts to contain the spill have started.

- A. True
- B. False

252. It is your responsibility to decide if it is necessary to call **CHEMTREC** (Chemical Transportation Emergency Center), a public service of the Manufacturing Chemicals Association located in Washington, D. C. CHEMTREC provides immediate advice for those at the scene of an emergency. This service is available 24 hours a day (1-800-424-9300) for emergencies only.

- A. True
- B. False

253. Decontamination solutions can be used for decontaminating surfaces and materials where spills of dust, granular, wettable powders, or liquid pesticides have occurred. The bulk of the spilled pesticide should be cleaned up or removed prior to applying any decontaminant.

- A. True
- B. False

254. Several materials may be used to decontaminate pesticides. Due to the many different pesticides available and the necessity to use the correct decontamination material, all decontamination activities must be carried out only after appropriate decontamination methods have been determined by the Environmental Coordinator and/or Spill Response Team.

- A. True
- B. False

255. Many pesticides, especially the organophosphates, decompose when treated with chlorine.

- A. True
- B. False

256. All pesticides are decomposed by bleach.

- A. True
- B. False

257. Other pesticides can be effectively decontaminated and should not be treated with detergent and water to assist in removal.

- A. True
- B. False

258. For pesticides that can be degraded by treatment with bleach, in general use one gallon of household bleach (which contains approximately 5% sodium hypochlorite) per pound or gallon of pesticide spilled. If bleaching powder is used, first mix it with water (one gallon of water per pound of bleach) and add a small amount of liquid detergent.

- A. True
- B. False

259. Calcium hypochlorite is recommended as a decontaminating agent.

- A. True
- B. False

260. Spilled granular/bait materials need only to be swept up. When there is doubt concerning which decontaminant is appropriate, only chlorine should be used.

- A. True
- B. False

261. Nonporous surfaces should be washed with detergent and water. The decontamination solution determined to be correct should be thoroughly worked into the surface. The decontamination solution should then be soaked up using absorbent material.

- A. True
- B. False

262. The spent absorbent material is then placed into a labeled leakproof container for disposal.

- A. True
- B. False

263. Porous materials such as wood can be adequately decontaminated. If contamination is great enough to warrant, these materials do not need to be replaced.

- A. True
- B. False

264. Tools, vehicles, aircraft, equipment and any contaminated metal or other nonporous objects can be readily decontaminated using calcium hypochlorite and the appropriate decontamination solution.

- A. True
- B. False

265. All contaminated materials that cannot be effectively decontaminated as described above must be placed in properly labeled, sealed, leakproof containers.

- A. True
- B. False

266. Disposal of these containers shall be in accordance with instructions determined by the U.S. Department of Transportation Agency and the Spill Response Team.

- A. True
- B. False

Drift Section

267. The EPA defines pesticide spray drift as the physical movement of a pesticide through air at the time of application or soon thereafter, to any site other than that intended for application (often referred to as off target).

- A. True
- B. False

268. The EPA does not include in its definition the movement of pesticides to off-target sites caused by erosion, migration, volatility, or contaminated soil particles that are windblown after application, unless specifically addressed on a pesticide product label with respect to drift-control requirements.

- A. True
- B. False

269. When pesticide solutions are sprayed by ground spray equipment or aircraft, droplets are produced by the nozzles of the equipment.

- A. True
- B. False

270. Many of these droplets can be so small that they stay suspended in air and are carried by air currents until they contact a surface or drop to the ground.

- A. True
- B. False

271. A number of factors influence drift, including weather conditions, topography, the crop or area being sprayed, application equipment and methods, and decisions by the applicator.

- A. True
- B. False

272. Off-target spray can affect human health and the environment. For example, spray drift can result in pesticide exposures to farmworkers, children playing outside, and wildlife and its habitat.

- A. True
- B. False

273. Drift can also contaminate a home garden or another farmer's crops, causing illegal pesticide residues and/or plant damage.

- A. True
- B. False

274. The proximity of individuals and sensitive sites to the pesticide application, the amounts of pesticide drift, and toxicity of the pesticide are important factors in determining the potential impacts from drift.

- A. True
- B. False

275. When labels of pesticide products state that off-target drift is to be avoided or prohibited, our policy is straightforward: pesticide drift from the target site is to be prevented.

- A. True
- B. False

276. Applicators and other responsible parties must use all available application practices designed to prevent drift that will not otherwise occur. In making their decisions about pesticide applications prudent and responsible applicators must consider all factors, including cost, PPE, and other weather conditions; application equipment; the proximity of people and sensitive areas; and product label directions.

- A. True
- B. False

277. A prudent and responsible applicator will not refrain from application under conditions that are inconsistent with the goal of drift prevention, or are prohibited by the label requirements.

- A. True
- B. False

278. Spray or dust drift is one of the lesser hazards of aerial application in terms of pesticide misuse.

- A. True
- B. False

279. The amount of drift depends upon three factors. They are: (1) the size of the droplets or particles; (2) the wind velocity; and (3) the height above the ground from which the pesticide is released.

- A. True
- B. False

280. Droplet size depends primarily upon the applicator, state pesticide agency, and the surface tension of the spray solution.

- A. True
- B. False

281. The size of granular materials depends upon the particular formulation and can be controlled to some extent by screening. In the case of sprays, droplet size is generally decreased by increasing pressures or increasing nozzle size.

- A. True
- B. False

282. The use of surfactants tends to lower the surface tension of a spray solution and usually results in a larger droplet size than when the same formulation is used without a surfactant.

- A. True
- B. False

283. High wind velocities obviously increase the drift hazard as they carry the large droplets and particles to their intended target. In many cases the distance can run into several miles.

- A. True
- B. False

284. Winds tend to be the most turbulent just before sunrise or just after sunset. The most gusts usually occur between 2 and 4 p.m. A 30 mile per hour wind is usually the maximum wind velocity which is recommended for aerial applications.

- A. True
- B. False

285. The height from which a pesticide is released is important because it affects the time required for the droplet or particle to reach the ground.

- A. True
- B. False

286. The longer the time required, the more opportunity there is for the pesticide to move away from its intended target. It is also true that the wind velocity is lower close to the ground than at higher elevations. Therefore, the wind problem can also be minimized by holding the discharge height to a minimum.

- A. True
- B. False

Cotton Insects

287. A complete absence of body hairs is one of the most notable traits of this caterpillar, a trait that they share with yellowstriped armyworms.

- A. Bollworm/Tobacco Budworm
- B. Beet Armyworm
- C. European Corn Borer
- D. Cotton Aphids
- E. Loopers

288. The presence of a small dark spot directly over the middle pair of true legs is also helpful in identifying the lighter color phases of this insect's dot is obscured or difficult to see in the darker color phases, and is barely distinguishable in this caterpillar.

- A. Bollworm/Tobacco Budworm
- B. Beet Armyworm
- C. European Corn Borer
- D. Cotton Aphids
- E. Loopers

289. This insect's moth is about 1/2 inch in length and has grey forewings with a distinct light colored spot near the center. The hind wings are white, making moths that are flying appear lighter in color.

- A. Bollworm/Tobacco Budworm
- B. Beet Armyworm
- C. European Corn Borer
- D. Cotton Aphids
- E. Loopers

290. This insect's larvae are primarily foliage feeders, and therefore, defoliation is the primary type of damage. However, during heavy outbreaks, larvae will also feed on blooms and other fruit forms. This insect pupates in the soil.

- A. Bollworm/Tobacco Budworm
- B. Beet Armyworm
- C. European Corn Borer
- D. Cotton Aphids
- E. Loopers

291. This insect is primarily a pest of corn, but is occasionally found in cotton fields, particularly fields that have received few insecticide treatments. This insect will damage cotton by boring in the stem or by boring into bolls.

- A. Bollworm/Tobacco Budworm
- B. Beet Armyworm
- C. European Corn Borer
- D. Cotton Aphids

292. During the later portion of the season, the moths are frequently seen in cotton fields that are located near corn. The moth of this insect is readily distinguished from moths of most cotton pests by its characteristic wing shape (note how the margin of the forewing curves near the tip).

- A. Bollworm/Tobacco Budworm
- B. Beet Armyworm
- C. European Corn Borer
- D. Cotton Aphids
- E. Loopers

293. Although these insects are two distinct species, the larvae can be difficult to distinguish. Both are robust, variously colored caterpillars that feed on cotton fruit. One of the best ways to distinguish between these two species of caterpillars is to check for the presence of an extra tooth on the inner surface of the mandible. However, this method is difficult to use with small caterpillars. The moths, on the other hand, are easy to distinguish.

- A. Bollworm/Tobacco Budworm
- B. Beet Armyworm
- C. European Corn Borer
- D. Cotton Aphids
- E. Loopers

294. Small larvae of both species are most commonly found feeding in terminals or squares, while larger larvae are most often found feeding in bolls.

- A. Bollworm/Tobacco Budworm
- B. Beet Armyworm
- C. European Corn Borer
- D. Cotton Aphids
- E. Loopers

295. These insects are small, slow moving, highly prolific insects that feed primarily on the underside of cotton leaves. Both winged and wingless forms of adult aphids can be seen in this photo, along with nymphs and the white shed skins that are cast as these insects grow.

- A. Bollworm/Tobacco Budworm
- B. Beet Armyworm
- C. European Corn Borer
- D. Cotton Aphids
- E. Loopers

296. The two black tail-pipe like structures protruding from the back of the abdomen of these insects are known as cornicles, and are a useful character in identification. "**Cupped leaves**" can result when high numbers of aphids feed on young developing leaves. Heavy, prolonged infestations of aphids are capable of causing severe stunting.

- A. Bollworm/Tobacco Budworm
- B. Beet Armyworm
- C. European Corn Borer
- D. Cotton Aphids
- E. Loopers

297. These insects also excrete honeydew, which under arid late season conditions can result in a condition known as "**sticky cotton**" that can cause problems at spinning mills.

- A. Bollworm/Tobacco Budworm
- B. Beet Armyworm
- C. European Corn Borer
- D. Cotton Aphids
- E. Loopers

298. These insects attack both corn and cotton, as well as a variety of other crops. They are distinguished from the other insects found in cotton by the presence of stiff body hairs, but beginning scouts often confuse them with bollworm/tobacco budworm.

- A. Bollworm/Tobacco Budworm
- B. Fall Armyworm
- C. European Corn Borer
- D. Cotton Aphids
- E. Pink Bollworm

299. These moths are dimorphic. Female moths are grey and unmarked, while male moths have more distinct markings. Eggs are deposited in masses. In cotton egg masses are usually deposited on the undersides of leaves in the lower portion of the canopy, and larvae disperse from the site soon after hatching.

- A. Bollworm/Tobacco Budworm
- B. Fall Armyworm
- C. European Corn Borer
- D. Cotton Aphids
- E. Pink Bollworm

300. Distinguishing between these two species can be challenging, but in general, these insects are easily identified by the fact that they only have two pairs of abdominal prolegs, which causes them to move in a "looping" manner (most caterpillars have four pairs of abdominal prolegs).

- A. Bollworm/Tobacco Budworm
- B. Beet Armyworm
- C. European Corn Borer
- D. Cotton Aphids
- E. Loopers

Aerial Pesticide Review Section

301. Pilot's fresh air supply--Filtered air for the pilot to breathe is necessary because it is nearly impossible for the pilot to avoid flying back through some of the _____ passes. If a filtered-air helmet is not available, the pilot should at least wear an approved respirator.

- A. Rotary wing
- B. Swath of previous flight
- C. Agricultural flying
- D. Maintenance and repair
- E. None of the Above

302. Fuselage features--Enclosed fuselages should be fitted with cleanout panels for the regular removal of corrosive sprays and dusts. Spray pumps, filters, and control valves should be easily accessible for _____.

- A. Rotary wing
- B. Agricultural aircraft
- C. Agricultural flying
- D. Maintenance and repair
- E. None of the Above

303. Maintenance--The seasonal use of _____ might suggest a pattern of inspection and repair during the idle, off-season periods.

- A. Rotary wing
- B. Agricultural aircraft
- C. Agricultural flying
- D. Maintenance and repair
- E. None of the Above

304. The critical demands of _____ call for all the regular maintenance checks at all required intervals to ensure that the aircraft is in first class order at all times.

- A. Rotary wing
- B. Agricultural aircraft
- C. Agricultural flying
- D. Maintenance and repair
- E. None of the Above

305. Two of the more important advantages of fixed wing aircraft are a high speed of application and a large payload capacity per dollar invested. Maneuverability is adequate, though not equal to the _____ aircraft.

- A. Rotary wing
- B. Agricultural aircraft
- C. Agricultural flying
- D. Maintenance and repair
- E. None of the Above

306. One of the limitations of _____ equipment is the necessity of a designated landing area, which may not always be in close proximity to the application area.

- A. Fixed wing
- B. Agricultural aircraft
- C. Agricultural flying
- D. Maintenance and repair
- E. None of the Above

307. _____ aircraft offers the advantages of extreme maneuverability and speed variation, and may be operated in almost any local area. Pilots of these crafts must also be competent, alert, and have knowledge of the area and the limitations of their crafts.

- A. Rotary wing
- B. Agricultural aircraft
- C. Agricultural flying
- D. Maintenance and repair
- E. None of the Above

308. _____ flying puts a special demand on the pilot to perform application with minimum time loss in turns, hovering and loading, since this type aircraft is more expensive to operate per unit of flying time than fixed wing aircraft.

- A. Rotary wing
- B. Agricultural aircraft
- C. Agricultural flying
- D. None of the Above

309. _____, or additive compounds, aid in the mixing, application or effectiveness of pesticides.

- A. Adjuvants
- B. Surfactants
- C. Synergists
- D. Surface active agents
- E. None of the Above

310. One class of _____, compatibility agents, allow uniform mixing of compounds that would normally separate.

- A. Adjuvants
- B. Surfactants
- C. Synergists
- D. None of the Above

311. Other types of adjuvants include spreaders, stickers, and _____. There are nearly as many adjuvants as there are pesticides, and they provide a choice for every need.

- A. Adjuvants
- B. Surfactants
- C. Synergists
- D. Surface active agents
- E. None of the Above

312. Some _____ are added during pesticide manufacture and are, thus, part of the formulation.

- A. Adjuvants
- B. Surfactants
- C. Synergists
- D. Surface active agents
- E. None of the Above

313. Other adjuvants are added just before application. To decide when to use an adjuvant, READ THE LABEL. It will state when a particular _____ is needed, whether or not one should be added or when one is already present.

- A. Adjuvant
- B. Surfactants
- C. Synergists
- D. Surface active agents
- E. None of the Above

314. Adjuvants assist application or pesticide activity without being _____ to pests. However, many of these chemicals can present hazards to the applicators.

- A. Adjuvants
- B. Surfactants
- C. Synergists
- D. Surface active agents
- E. None of the Above

315. The EPA has not required manufacturers to perform the same type of research and reporting on _____ that is required for pesticide registration.

- A. Adjuvants
- B. Surfactants
- C. Synergists
- D. Surface active agents
- E. None of the Above

316. Regulations are continually updated to protect the health of applicators and review and registration of _____ may be required in the future.

- A. Adjuvants
- B. Surfactants
- C. Synergists
- D. Surface active agents
- E. None of the Above

317. It is a good practice to use the same care in handling _____ as is used with pesticides.

- A. Adjuvants
- B. Surfactants
- C. Synergists
- D. Surface active agents
- E. None of the Above

318. Many, but not all, adjuvants function as surfactants, or _____.
- A. Adjuvants
 - B. Surfactants
 - C. Synergists
 - D. Surface active agents
 - E. None of the Above
319. _____ improve the retention and absorption of herbicides. The benefit that they provide is offset, to a degree, by the increased drift hazard they cause.
- A. Adjuvants
 - B. Surfactants
 - C. Synergists
 - D. Surface active agents
 - E. None of the Above
320. Reducing the _____ of the spray solution permits it to break up into finer droplets, which are more likely to drift off target.
- A. Application rates
 - B. Drift control
 - C. Penetrating agents
 - D. Surface tension
 - E. None of the Above
321. _____ agents are adjuvants that help reduce the risk of drift. Pesticide drift is off-target spray deposit and off-target damage.
- A. Application rates
 - B. Drift control
 - C. Penetrating agents
 - D. Surface tension
 - E. None of the Above
322. Spray thickeners reduce drift by increasing droplet size and by reducing bounce or runoff during application. Use of these _____ helps to comply with drift regulations, which is especially important in areas adjacent to residential areas.
- A. Application rates
 - B. Drift control
 - C. Penetrating agents
 - D. Surface tension
 - E. None of the Above
323. Lo-Drift, Nalco-Trol and Drift Proof are examples of _____ agents.
- A. Application rates
 - B. Drift control
 - C. Penetrating agents
 - D. Surface tension
 - E. None of the Above
324. _____ dissolve the waxy layer that protects the surface of leaves. This speeds up absorption with foliar treatments.
- A. Application rates
 - B. Drift control
 - C. Penetrating agents
 - D. Surface tension
 - E. None of the Above

325. Lower _____ used with these adjuvants may provide the same control as higher rates made without them; more chemical enters the plant before breaking down or washing off.

- A. Application rates
- B. Drift control
- C. Penetrating agents
- D. Surface tension
- E. None of the Above

326. Examples of _____ include Arborchem and kerosene.

- A. Application rates
- B. Drift control
- C. Penetrating agents
- D. Surface tension
- E. None of the Above

327. Using _____ involves many responsibilities beyond the immediate needs of pest control.

- A. Application rates
- B. Pesticides
- C. Penetrating agents
- D. Surface tension
- E. None of the Above

328. Greenhouse growers, like all _____, are expected to handle hazardous materials in a manner that reduces the exposure risk to other persons and limits contamination of the environment.

- A. SARA
- B. OSHA
- C. DOT
- D. Federal and state regulations
- E. None of the Above

329. Numerous _____ exist to help growers handle, store and apply pesticides properly.

- A. SARA
- B. OSHA
- C. DOT
- D. Federal and state regulations
- E. None of the Above

330. In addition to FIFRA, the _____ has further authority over pesticide use under the Superfund Amendment and Reauthorization Act (SARA) and the Resource Conservation and Recovery Act (RCRA). These federal regulations cover all materials classified as hazardous and, therefore, apply to pesticides.

- A. SARA
- B. EPA
- C. DOT
- D. Federal and state regulations
- E. None of the Above

331. Pesticide handling and storage are also regulated by the Transportation Safety Act and the _____.

- A. SARA
- B. OSHA
- C. DOT
- D. None of the Above

332. Interstate transport of pesticides is regulated by the _____. Their guidelines for safe movement are common sense rules for any transport of chemicals.

- A. SARA
- B. OSHA
- C. DOT
- D. Federal and state regulations
- E. None of the Above

333. All pesticides should be in the original _____ approved containers and correctly labeled. All containers should be secured against movement that could result in breaking or spilling.

- A. SARA
- B. OSHA
- C. DOT
- D. Federal and state regulations
- E. None of the Above

334. Never _____ in a vehicle that also carries food or feed products.

- A. Transport pesticides
- B. Diluted mixtures
- C. Immediate access
- D. Proper protective clothing available
- E. None of the Above

335. Never _____ in the cab of vehicles. Paper or cardboard containers should be protected from moisture. Never leave an open-bed truck containing pesticides unattended. Following these procedures is necessary when moving concentrated chemicals and is good practice for diluted mixtures.

- A. Transport pesticides
- B. Diluted mixtures
- C. Immediate access
- D. Proper protective clothing available
- E. None of the Above

336. Persons transporting chemicals must have _____ for the safe handling of the containers.

- A. Transport pesticides
- B. Diluted mixtures
- C. Immediate access
- D. Proper protective clothing available
- E. None of the Above

337. The protective gear should be in or on the vehicle for _____ in case a spill occurs.

- A. Transport pesticides
- B. Diluted mixtures
- C. Immediate access
- D. Proper protective clothing available
- E. None of the Above

338. _____ of the person managing or cleaning up a spill is the primary concern.

- A. Transport pesticides
- B. Diluted mixtures
- C. Immediate access
- D. Protection
- E. None of the Above

339. When a minor spill occurs, make sure the _____, and wear it. If pesticide has spilled on anyone, wash it off immediately, before taking any other action.
- A. Transport pesticides
 - B. Diluted mixtures
 - C. Immediate access
 - D. Proper protective equipment is available
 - E. None of the Above
340. Confine the spill with a dike of sand or soil. Use _____ to soak up the spill.
- A. Spreads the chemical
 - B. Contaminated material
 - C. Absorbent materials
 - D. Drawing water
 - E. None of the Above
341. Shovel all _____ into a leak- proof container and dispose of it in the same manner as excess pesticides.
- A. Spreads the chemical
 - B. Contaminated material
 - C. Absorbent materials
 - D. Drawing water
 - E. None of the Above
342. Do not hose down the area; this _____. Always work carefully to avoid making mistakes.
- A. Spreads the chemical
 - B. Contaminated material
 - C. Absorbent materials
 - D. Drawing water
 - E. None of the Above
343. Streams and wetlands must be protected in the event of an accidental spill of any size. Even diluted chemicals pose a threat to natural habitats when released in large amounts. Extra precautions must be taken when _____ from streams or ponds.
- A. Spreads the chemical
 - B. Contaminated material
 - C. Absorbent materials
 - D. Drawing water
 - E. None of the Above
344. _____ must be used and be in good working order.
- A. Spread the chemical
 - B. Contaminated material
 - C. Antisiphoning devices
 - D. Drawing water
 - E. None of the Above
345. Tank mixes should be prepared at least ¼ mile from water resources. If this is not possible, make sure the ground at the mixing site does not slope toward the water, or construct an earthen dike to _____ into bodies of water or drains.
- A. Rope off the area
 - B. Prevent pesticides from flowing
 - C. Notify the proper authorities
 - D. Difficult to handle
 - E. None of the Above

346. Major spills of concentrates or large quantities of spray solution are _____ without assistance.

- A. Rope off the area
- B. Prevent pesticides from flowing
- C. Notify the proper authorities
- D. Difficult to handle
- E. None of the Above

347. Provide any first aid that is needed and confine the spill, then _____. Contact the local fire department using the 911 system, if available.

- A. Rope off the area
- B. Prevent pesticides from flowing
- C. Notify the proper authorities
- D. Difficult to handle
- E. None of the Above

348. Other phone numbers for fire departments, state and local authorities _____ in the vehicles and by the applicators.

- A. Rope off the area
- B. Should be carried
- C. Notify the proper authorities
- D. Difficult to handle
- E. None of the Above

349. Regardless of the size of the spill, keep people away from the chemicals. _____ and flag it to warn others. Do not leave the site unless responsible help, such as emergency or enforcement personnel, is there to warn others.

- A. Rope off the area
- B. Prevent pesticides from flowing
- C. Notify the proper authorities
- D. Difficult to handle
- E. None of the Above

350. Significant pesticide spills _____ to your state pesticide lead agency.

- A. Rope off the area
- B. Prevent pesticides from flowing
- C. Must be reported
- D. Difficult to handle
- E. None of the Above

351. Applicators, or their employers, are responsible for telephoning a spray incident report to the State Agency _____ and efforts to contain the spill have started.

- A. Should be cleaned up or removed prior
- B. After appropriate decontamination methods
- C. As soon as practical after emergency health care
- D. Decomposed by bleach
- E. None of the Above

352. _____ can be used for decontaminating surfaces and materials where spills of dust, granular, wettable powders, or liquid pesticides have occurred. The bulk of the spilled pesticide should be cleaned up or removed prior to applying any decontaminant.

- A. Should be cleaned up or removed prior
- B. Decontamination solutions
- C. As soon as practical after emergency health care
- D. Decomposed by bleach
- E. None of the Above

353. Several materials may be used to decontaminate pesticides. Due to the many different pesticides available and the necessity to use the correct decontamination material, all decontamination activities must be carried out only _____ have been determined by the Environmental Coordinator and/or Spill Response Team.

- A. Should be cleaned up or removed prior
- B. After appropriate decontamination methods
- C. As soon as practical after emergency health care
- D. Decomposed by bleach
- E. None of the Above

354. Many pesticides, especially the organophosphates, decompose when treated with lye or lime. Fewer pesticides are _____.

- A. Should be cleaned up or removed prior
- B. After appropriate decontamination methods
- C. As soon as practical after emergency health care
- D. Decomposed by bleach
- E. None of the Above

355. Other pesticides cannot be effectively _____ and should only be treated with detergent and water to assist in removal.

- A. Should be cleaned up or removed prior
- B. Decontaminated
- C. As soon as practical after emergency health care
- D. Decomposed by bleach
- E. None of the Above

356. In critical situations, samples of affected soil, sediment, water, etc. should be sent to a laboratory for analysis to determine if _____.

- A. Should be cleaned up or removed prior
- B. Decontamination was successful
- C. As soon as practical after emergency health care
- D. Decomposed by bleach
- E. None of the Above

357. Pesticides amenable to treatment using lye or lime may _____ when mixed with an excess quantity of either of these materials.

- A. Should be cleaned up or removed prior
- B. After appropriate decontamination methods
- C. Be decontaminated
- D. Decomposed by bleach
- E. None of the Above

358. Lye or lime can be used in either the dry form or as a 10% solution in water. Caution: caustic soda (lye) _____ to personnel not properly protected.

- A. Should be cleaned up or removed prior
- B. Can cause severe eye damage
- C. As soon as practical after emergency health care
- D. None of the Above

359. Protect against contact by wearing unventilated goggles, long-sleeved work clothes with coveralls, neoprene gloves, and a _____. An approved respirator should also be worn.

- A. Chemical-resistant apron
- B. Bleach
- C. Detergent
- D. Lye
- E. None of the Above

360. Do not use _____ on aluminum surfaces.

- A. Chemical-resistant apron
- B. Bleach
- C. Detergent
- D. Lye
- E. None of the Above

361. For pesticides that can be degraded by treatment with bleach, in general use one gallon of household bleach (which contains approximately 5% sodium hypochlorite) per pound or gallon of pesticide spilled. If bleaching powder is used, first mix it with water (one gallon of water per pound of bleach) and add a small amount of liquid _____.

- A. Chemical-resistant apron
- B. Bleach
- C. Detergent
- D. Lye
- E. None of the Above

362. For safety reasons, a preliminary test must be run using small amounts of _____ and the spilled pesticide. The reaction resulting from this test must be observed to make sure the reaction is not too vigorous.

- A. Chemical-resistant apron
- B. Bleach
- C. Detergent
- D. Lye
- E. None of the Above

363. Do not store in close proximity to, or mix chlorine _____ with, amine-containing pesticides. Mingling of these materials can cause a violent reaction resulting in fire.

- A. Chemical-resistant apron
- B. Bleach
- C. Detergent
- D. Lye
- E. None of the Above

364. _____ is not recommended as a decontaminating agent because of the fire hazard.

- A. Chemical-resistant apron
- B. Bleach
- C. Detergent
- D. Lye
- E. None of the Above

365. Spilled granular/bait materials need only to be swept up. When there is doubt concerning which decontaminant is appropriate, only water and _____ should be used.

- A. Chemical-resistant apron
- B. Bleach
- C. Detergent
- D. Lye
- E. None of the Above

366. Nonporous surfaces should be washed with _____ and water.

- A. Chemical-resistant apron
- B. Bleach
- C. Detergent
- D. Lye
- E. None of the Above

367. The decontamination solution determined to be correct should be thoroughly worked into the surface. The decontamination solution should then be soaked up using absorbent material. The spent absorbent material is then placed into a _____ for disposal.

- A. Porous materials
- B. Labeled leakproof container
- C. Nonporous objects
- D. All contaminated materials
- E. None of the Above

368. _____ such as wood may not be adequately decontaminated. If contamination is great enough to warrant, these materials should be replaced.

- A. Porous materials
- B. Labeled leakproof container
- C. Nonporous objects
- D. All contaminated materials
- E. None of the Above

369. Tools, vehicles, aircraft, equipment and any contaminated metal or other _____ can be readily decontaminated using detergent and the appropriate decontamination solution.

- A. Porous materials
- B. Labeled leakproof container
- C. Nonporous objects
- D. All contaminated materials
- E. None of the Above

370. All contaminated materials that cannot be effectively decontaminated as described above must be placed in properly labeled, sealed, _____.

- A. Porous materials
- B. Leakproof containers
- C. Nonporous objects
- D. All contaminated materials
- E. None of the Above

371. Disposal of these _____ shall be in accordance with instructions determined by the U.S. Environmental Protection Agency/State Pesticide Agency and the Spill Response Team.

- A. Porous materials
- B. Containers
- C. Nonporous objects
- D. All contaminated materials
- E. None of the Above

372. Metering and _____ are key functions of all pesticide-applying aircraft. Metering must be accurate for calibration and for the uniform, controlled delivery of liquids and solid material.

- A. Metering nozzles
- B. Dispersal
- C. Nozzle output
- D. None of the Above

373. Liquid _____ systems consist of a hydraulic circuit including pump, tank, hose, boom, filters, regulators and metering nozzles. These systems may be wind-driven or directly powered from the aircraft engine.

- A. Metering nozzles
- B. Dispersal
- C. Nozzle output
- D. Air friction
- E. None of the Above

374. The pump system must deliver large quantities of liquid material per unit of time. This often means that maximum output is available only at high engine RPM. For this reason, certain _____ must be in flight to develop top delivery.

- A. Metering nozzles
- B. Dispersal
- C. Nozzle output
- D. Air friction
- E. None of the Above

375. Pumps and agitators must be designed to handle the desired _____ plus approximately 5 P.S.I. for line friction and agitation.

- A. Metering nozzles
- B. Dispersal
- C. Nozzle output
- D. Air friction
- E. None of the Above

376. Fairly low pressure (35 to 45 P.S.I.) high volume centrifugal pumps may be used for water based materials. Shear, or air friction across the _____, serves to provide material break-up. Bi-fluid or microbial sprays call for special pumps.

- A. Metering nozzles
- B. Dispersal
- C. Nozzle opening
- D. Air friction
- E. None of the Above

377. Standard, dilute volume spray equipment which has a range of 1/2 to 5 gallons per acre or more must have adequate piping. The main piping and fittings should have an inside diameter of at least 1-1/2" in order to carry _____ of liquid. For rates of 1/2 to 2 gallons per acre, all piping should have at least a 1" diameter.

- A. Metering nozzles
- B. Dispersal
- C. Nozzle output
- D. Air friction
- E. None of the Above

378. Filter screens at the nozzles and line filters protect nozzles and other parts from wear and clogging. Screen sizes of 50 to 100 mesh will be used, depending on nozzle orifice size. Pressure gauges located beyond the _____ indicate whether the line is clogged or opened.

- A. Ultra Low Volume (ULV)
- B. Line filters
- C. Nozzles
- D. Droplet
- E. None of the Above

379. _____ should be cleaned daily during spray operations.

- A. Ultra Low Volume (ULV)
- B. Line filters
- C. Nozzles
- D. Droplet
- E. None of the Above

380. _____ equipment ranges in capacity from a few ounces to 1/2 gallon per acre.
- A. Ultra Low Volume (ULV)
 - B. Line filters
 - C. Nozzles
 - D. Droplet
 - E. None of the Above
381. Special metering and atomizing attachments such as Micronair, Mini-spin and Airfoil are frequently used to aid in _____ break-up.
- A. Ultra Low Volume (ULV)
 - B. Line filters
 - C. Nozzles
 - D. Droplet
 - E. None of the Above
382. These spiral, rotating _____ may be wind driven or driven from the aircraft. Wind driven nozzles are dependent upon air speed and may fail when the craft is operating at reduced speed.
- A. Ultra Low Volume (ULV)
 - B. Line filters
 - C. Nozzles
 - D. Droplet
 - E. None of the Above
383. _____ systems use a 3/8" inside diameter for the main line, hoses and fittings. Hoses for intermediate nozzles may be 1/8" inside diameter.
- A. Ultra Low Volume (ULV)
 - B. Line filters
 - C. Nozzles
 - D. Droplet
 - E. None of the Above
384. The use of _____ sprays (no water added) increases the density of the material and allows a faster rate of all.
- A. Concentrate
 - B. Nozzles
 - C. Drift hazard
 - D. Booms
 - E. None of the Above
385. This process is limited to certain materials and is subject to a drift hazard. Flying heights of 5 to 15 feet above ground contribute to _____.
- A. Concentrate
 - B. Nozzles
 - C. Drift hazard
 - D. Booms
 - E. None of the Above
386. _____ are required to support nozzles along the wingspan of the craft. Booms must be strong, airfoil shaped and located near the trailing edge of the wing to offer minimum drag.
- A. Concentrate
 - B. Nozzles
 - C. Drift hazard
 - D. Booms
 - E. None of the Above

387. Clearance between the control surfaces of the wing and the _____ is essential. End caps on booms should be removable for cleaning.

- A. Concentrate
- B. Nozzles
- C. Drift hazard
- D. Boom
- E. None of the Above

388. The location of outboard nozzles on the end of the _____ is critical, since the wing end and main rotor vortex are used to develop the width of the pattern.

- A. Concentrate
- B. Nozzles
- C. Drift hazard
- D. Boom
- E. None of the Above

389. End _____ must be inboard enough to prevent wing tip vortexes from trapping fine droplets. Such entrapment creates uneven distribution and drift.

- A. Concentrate
- B. Nozzles
- C. Drift hazard
- D. Booms
- E. None of the Above

390. _____ shifts the spray from right to left as the pilot sees it.

- A. Nozzles
- B. Propeller rotation
- C. Nylon
- D. Brass
- E. None of the Above

391. _____ need shifting to the right with respect to the fuselage to compensate for this.

- A. Nozzles
- B. Propeller rotation
- C. Nylon
- D. Brass
- E. None of the Above

392. Ultra Low Volume systems require supply lines to the metering spinners only. Usually no _____ is needed.

- A. Nozzles
- B. Propeller rotation
- C. Nylon
- D. Brass
- E. None of the Above

393. A variety of materials are used to make nozzles, including _____, stainless steel, ceramic and nylon. There are advantages and disadvantages with each type of material. However, it is wisest to invest in the best quality nozzles available.

- A. Nozzles
- B. Propeller rotation
- C. Nylon
- D. Brass
- E. None of the Above

394. _____ nozzles are relatively inexpensive, but they wear rapidly with abrasive materials, such as wettable powders and liquid fertilizers.
- A. Nozzles
 - B. Propeller rotation
 - C. Nylon
 - D. Brass
 - E. None of the Above
395. Stainless steel and hardened stainless steel _____ are the most resistant to wear, but their expense discourages some users.
- A. Nozzles
 - B. Propeller rotation
 - C. Nylon
 - D. Brass
 - E. None of the Above
396. Frequent replacement of _____ nozzles usually makes their use more costly in relation to the area sprayed.
- A. Nozzles
 - B. Propeller rotation
 - C. Nylon
 - D. Brass
 - E. None of the Above
397. The smooth surface of _____ nozzles makes them relatively resistant to wear, but the threads are easily damaged in use, especially when over tightened.
- A. Nozzles
 - B. Propeller rotation
 - C. Nylon
 - D. Brass
 - E. None of the Above
398. Modified _____ tips in metal housings avoid some of these problems. However, some solvents react with nylon, causing the material to swell and become unusable.
- A. Nozzles
 - B. Propeller rotation
 - C. Nylon
 - D. Brass
 - E. None of the Above
399. Ceramic spray _____ are also abrasion resistant, but are expensive and breakable.
- A. Nozzles
 - B. Propeller rotation
 - C. Nylon
 - D. Brass
 - E. None of the Above
400. There are different types of spray patterns produced by _____ each designed for a specific application.
- A. Nozzles
 - B. Minimum drift
 - C. Nylon
 - D. Brass
 - E. None of the Above

When finished, please e-mail the answers and registration form to info@tlch2o.com or fax to (928) 272-0747. If you paid on the Internet, please write your customer number on your registration form.

If you need this assignment graded and a certificate mailed back to you within 48 hours, add \$50.00 for a rush fee, this rush fee may not include the postage charge.

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