

Registration form

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Commercial Applicator _____ Residential Applicator _____ Industrial Applicator _____
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Important Information about this Course (Disclaimer Notice)

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

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

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

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

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**Multiple Choice Exam. Pick only one answer per question.
Circle or Mark off or Bold the answer.**

Topic 1 - Pesticide Safety Introduction

15 final exam questions. (s) Means answer can be singular or plural.

1. A B C D

6. A B C D

11. A B C D

2. A B C D

7. A B C D

12. A B C D

3. A B C D

8. A B C D

13. A B C D

4. A B C D

9. A B C D

14. A B C D

5. A B C D

10. A B C D

15. A B C D

Topic 2 – Proper Pesticide Handling Section Answers

15 final exam questions. (s) Means answer can be singular or plural.

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

Topic 3 – Personal Protection Section Answers

15 final exam questions. (s) Means answer can be singular or plural.

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

Topic 4 – Environmental Effects Section Answers

15 final exam questions. (s) Means answer can be singular or plural.

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

Topic 5 – Hazard Communication Section Answers

15 final exam questions. (s) Means answer can be singular or plural.

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

Topic 6 – Advanced Safety Competency Answers

15 final exam questions. (s) Means answer can be singular or plural.

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

Topic 7 — Advanced Safety Competency Answers

15 final exam questions. (s) Means answer can be singular or plural.

- | | | |
|------------|-------------|-------------|
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| 2. A B C D | 7. A B C D | 12. A B C D |
| 3. A B C D | 8. A B C D | 13. A B C D |
| 4. A B C D | 9. A B C D | 14. A B C D |
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ASSIGNMENT INSTRUCTION PAGE NUMBERS

If your last name begins with an **A to G**, your assignment is # 1- Pages 9-21

If your last name begins with the letter **H to M**, your assignment is # 2 – Pages 23-35

If your last name begins with the letter **N to S**, your assignment is # 3 –Pages 37-49

If your last name starts with **T to Z**, your assignment is # 4- Pages 51-63

If you are a repeat student, the alterative version # 5 assignment – Pages 65-77

Pesticide Medias – Primary Delivery Systems: Identify the proper definition.

7. These are also effective in areas of poor sanitation where readily available food renders traditional baits ineffective.

- A. Liquid Baits
- B. Wettable Powders
- C. Dry or Solid Formulations
- D. None of the above

8. The amount of active ingredient is relatively low, usually ranging from less than 1 to 15 percent by weigh.

- A. Granules
- B. Ultra-Low Volume (ULV)
- C. Dry or Solid Formulations
- D. None of the above

9. Few pesticides are available in this formulation because few active ingredients are readily soluble in water.

- A. Fumigants
- B. Dry or Solid Formulations
- C. Soluble Powders
- D. None of the above

10. These special purpose formulations are used mostly in outdoor applications, such as in agricultural, forestry, ornamental, and mosquito control programs.

- A. Water-Soluble Packets
- B. Ultra-Low Volume (ULV)
- C. Liquid Formulations
- D. None of the above

Six Basic IPM Components: Identify the components definition.

11. Should a pest reach an unacceptable level; mechanical methods are the first options to consider. They include simple hand-picking, erecting insect barriers, using traps, vacuuming, and tillage to disrupt breeding.

- A. Biological controls
- B. Mechanical controls
- C. Acceptable pest levels
- D. None of the above

12. Natural biological processes and materials can provide control, with minimal environmental impact, and often at low cost. The main focus here is on promoting beneficial insects that eat target pests.

- A. Responsible Pesticide Use
- B. Acceptable pest levels
- C. Biological controls
- D. None of the above

Adsorption

13. Which of the following tend to adsorb onto and within organic matter, making them even less bioavailable?

- A. The chemical structure
- B. Chemical and physical properties
- C. Water-insoluble pesticides
- D. None of the above

14. Which of the following does the pesticide and the organic matter dictates the strength of this pesticide-organic matter interaction?

- A. Hydrolysis
- B. Chemical and physical properties
- C. The chemistry of the functional groups
- D. None of the above

Chemical Degradation

15. Temperature, moisture, pH and adsorption, in addition to the chemical and physical properties of the pesticide, determine which _____ take place and how quickly they occur.

- A. The chemical structure
- B. Chemical reactions
- C. Water-insoluble pesticides' chemical reactions
- D. None of the above

Topic 2 – Proper Pesticide Handling Section Assignment

15 Multiple choice questions.

Mixing and Loading Pesticides

1. One of the _____ related to pesticide-related illness, is the mixing and loading of concentrated chemicals, specifically low-volume and ultra-low volume formulations.
- A. Handling pesticide waste(s) C. Most dangerous jobs
B. Potentially harmful D. None of the above

Pour Pesticides Carefully

2. Always wear eye protection and take care not to splash chemicals when _____. Never use your mouth to siphon pesticides.
- A. Handling waste(s) C. Pesticide accidents
B. Pouring pesticides D. None of the above

Mixing Pesticides Summary

3. Always read and carefully follow label directions when _____. Even if you are familiar with a particular chemical, reread the label to ensure that you have the latest safety information.
- A. Cleanups C. Mixing pesticides
B. Splashing chemicals D. None of the above

Rinsing Helps Protect the Environment

4. Proper rinsing of pesticide containers reduces a _____ of soil, surface, and ground water.
- A. Bunch of problems C. Potential source of contamination
B. Potentially harmful concerns D. None of the above

Pesticide Spills

5. In spite of the most careful use and handling of pesticides, accidental spills and fires occasionally occur. These range in size from small spills of a household pesticide container to huge fires involving entire manufacturing warehouses filled with the _____.
- A. Two (or more) pesticides C. 100 percent active ingredient(s)
B. Most toxic pesticides D. None of the above

Decontamination Supplies

6. Which of the following must make sure that decontamination supplies for washing off pesticides and pesticide residues are provided to handlers while they are doing handling tasks?
- A. Workers C. Handler employers
B. Handlers D. None of the above

Ready-to-Use Low-Concentrate Solutions (RTU)

7. Low-concentrate formulations are ready to use and require no further dilution before application. They consist of a _____ dissolved in an organic solvent. They usually do not stain fabrics or have unpleasant odors.
- A. Low-concentrate formulation(s) C. Small amount of active ingredient
B. Most toxic pesticides D. None of the above

Ultra-low Volume (ULV)

8. These concentrates may approach 100 percent active ingredient. They are designed to be used as is or to be diluted with only small quantities of a specified carrier and are used at rates of no more than 1/2 gallon per acre. These _____ are used mostly in outdoor applications, such as in agricultural, forestry, ornamental, and mosquito control programs.

- A. Special purpose formulations
- B. Two (or more) pesticides
- C. Low-concentrate formulation(s)
- D. None of the above

Restricted-Entry Interval (REI)

9. The restricted-entry interval is the time immediately after a pesticide application when entry into the _____ is limited.

- A. Spills/releases
- B. Different REIs
- C. Treated area
- D. None of the above

10. Which of the following will have one REI, such as 12 hours, for all crops and uses? Other products have different REIs depending on the crop or method of application. When two (or more) pesticides are applied at the same time, and have different REIs, you must follow the longer interval.

- A. Organic solvent(s)
- B. Some pesticides
- C. Low-concentrate formulation(s)
- D. None of the above

WPS Requires Providing Decontamination Sites

11. Employers must establish a decontamination site for all workers and handlers for washing off pesticides and pesticide residues. A decontamination site must be within a quarter (1/4) mile of the?

- A. Spills/releases
- B. Employees' work site
- C. Drifting from nearby applications
- D. None of the above

Emergency and First-Aid Procedures

12. Emergency procedures—know what to do in case of an emergency such as an accidental spill or exposure. The SDS (formerly MSDS) may also provide emergency phone numbers for reporting certain?

- A. Spills/releases
- B. Different REIs
- C. Drifting from nearby applications
- D. None of the above

Each WPS Safety Poster Must Convey to Workers and Handlers

13. How to help keep pesticides from getting on or into their bodies. The poster must include the following instructions: Avoid getting on your skin or into your body any pesticides that may be on plants and soil, in irrigation water, or from?

- A. Spills/releases
- B. Treated or restricted areas
- C. Drifting from nearby applications
- D. None of the above

Activated Charcoal

14. Activated charcoal is sometimes administered because it has been shown to be successful with some?

- A. Syrups of ipecac
- B. Mecoprops
- C. Pesticides
- D. None of the above

15. Which of the following can reduce the amount absorbed if given within 60 minutes, though there is not enough data to determine if it is effective if time from ingestion is prolonged?

- A. Syrup of ipecac
- B. Milk
- C. Activated charcoal
- D. None of the above

Topic 3 – Personal Protection Section Post Quiz

Preparing to Apply Pesticides Preparation is essential for chemical safety.

Follow the steps below to properly prepare for pesticide application:

Select Application Equipment

1. Choose _____ to properly apply pesticides. Before using the equipment, inspect it for good working order.

- A. Suitable equipment
- B. Product label
- C. Personal decontamination site
- D. None of the above

Select Appropriate Personal Protective Equipment

2. Wear additional protective equipment, as necessary. Inspect all PPE before each use for leaks, holes, tears, or worn places. Repair or discard _____.

- A. Any damaged equipment
- B. Product label
- C. Personal decontamination
- D. None of the above

Pesticide Label Breakdown

Restricted Use Designation

3. Which of the following require a pesticide license and will not be in most retail stores and is not meant for homeowner use?

- A. Restricted use chemical(s)
- B. Active ingredient
- C. Acute toxicity of a pesticide
- D. None of the above

Signal Word

4. The signal word corresponding to the _____ to which a pesticide product is assigned must appear on the front panel of the label.

- A. Precautionary Statements
- B. Active ingredient
- C. Highest/most toxic acute toxicity category
- D. None of the above

Personal Protective Equipment

5. All pesticide handlers—applicators, mixer/loaders, flaggers, and early-entry agricultural workers—are legally required to follow all PPE instructions that appear on the _____.

- A. Product label
- B. Active ingredient
- C. Highest/most toxic acute toxicity category
- D. None of the above

Hazard = Toxicity x Exposure

6. Which of the following is the chemical component in the pesticide product that controls the pest?

- A. Active ingredient
- B. Toxicity Category I
- C. Most serious pesticide poisoning(s)
- D. None of the above

Acute Toxicity and Acute Effects

7. Acute toxicity of a pesticide refers to the chemical's ability to cause injury to a person or animal from a single exposure, generally of short duration. The harmful effects that occur from a single exposure by any route of entry are termed "_____."

- A. Acute effects
- B. Toxicity Category I
- C. Most serious pesticide poisoning(s)
- D. None of the above

8. Which of the following is determined by examining the dermal toxicity, inhalation toxicity, and oral toxicity of test animals. In addition, eye and skin irritation are also examined?
- A. Restricted use chemical(s)
 - B. Active ingredient
 - C. Acute toxicity
 - D. None of the above

Respiratory Protection Sub-Section Types of Respirators Commonly Used Respirators (Air Purifying)

9. _____ have interchangeable filter cartridges and can protect the respiratory system from hazardous dusts, fumes, mists, etc.
- A. Air-Line Respirators
 - B. Half-Face Respirators
 - C. Disposable Dust masks
 - D. None of the above
10. Half-Face Respirators generally operate under negative pressure within the respirator which is created by the wearer's breathing through the filter cartridges. Protection is only gained if there is a proper seal of the _____.
- A. Proper respiratory protection
 - B. Wearer's breathing zone
 - C. Respirator face piece
 - D. None of the above

Less Commonly Used Types Respirators (Air Supplying)

11. _____ supply clean air to the wearer through a small diameter hose from a compressor or compressed air cylinders. Because the wearer must be attached to the hose at all times, mobility is limited.
- A. Air-Line Respirators
 - B. Full-Face Respirators
 - C. Disposable Dust masks
 - D. None of the above

Respirator Filters/Cartridges

12. The cartridges used for _____ must be either equipped with an end-of-service life indicator (ESLI) or a cartridge change schedule has to be established.
- A. Air-Line Respirators
 - B. Full-Face Respirators
 - C. Air-purifying respirators
 - D. None of the above

Protection Factors

13. The protection factor of a respirator is based on the ratio of two concentrations: the _____ outside the respirator to the contaminant concentration inside the respirator.
- A. Contaminant concentration
 - B. Oxygen level
 - C. Oxygen deficiency
 - D. None of the above

Panic

14. _____ is important when working in a hot, stressful, or awkward situation.
- A. A respirator
 - B. Staying calm
 - C. Following recommendations
 - D. None of the above

Cleaning Respirators

15. Respirators should be cleaned and disinfected once a year. Check the respirator for damage before wearing it.
- A. True
 - B. False

Spray Drift

11. Another way in which 2,4-D injury can occur is by _____.
- A. Windy condition(s) C. Sticker(s) drift
B. Spray drift D. None of the above
12. Spraying during windy conditions and using nozzles and pressures that result in the creation of fine spray droplets increase the risk of _____.
- A. Spray droplet(s) C. Vapor injury
B. Spray drift D. None of the above

Vapor Drift (Volatilization)

13. Most cases of 2,4-D injury to cotton result from _____ of an ester-containing formulation of 2,4-D.
- A. Spray drift C. Nonionic spray
B. Vapor drift D. None of the above
14. Which of the following injury results when the herbicide volatilizes and the vapors move to a susceptible crop such as cotton?
- A. Sticker(s) C. Mist
B. Vapor drift D. None of the above
15. Injury from _____ can occur at rather long distances from the sprayed area.
- A. Spray droplet(s) C. Vapor drift
B. Spray D. None of the above

Topic 5 –Hazard Communication Section

Revised Hazard Communication Program

1. The new Hazard Communication Standard still requires chemical manufacturers and importers to evaluate the chemicals they produce or import and provide _____ to employers and workers by putting labels on containers and preparing safety data sheets.
- A. Safety data sheets and labels C. Hazard information
B. Specific criteria D. None of the above
2. Which of the following provides a single set of harmonized criteria for classifying chemicals according to their health and physical hazards and specifies hazard communication elements for labelling and safety data sheets?
- A. Safety data sheets and labels C. Modified standard
B. Specific criteria D. None of the above
3. The Safety Data Sheet is at the heart of federal OSHA's?
- A. Hazard communication standard (HazCom) C. Hazardous chemicals
B. Right to understand D. None of the above
4. OSHA's HazCom rule has significant new requirements that will require employers to train their employees how to read and interpret the?
- A. New SDS C. Hazardous chemicals
B. Identities and hazards D. None of the above

More on the Revised Hazard Communication Standard

5. Which of the following will provide a common and coherent approach to classifying chemicals and communicating hazard information on labels and safety data sheets?

- A. Safety data sheets and labels
- B. Specific criteria
- C. Hazard Communication Standard (HCS)
- D. None of the above

Major changes to the Hazard Communication Standard

6. Which of the following provides specific criteria for classification of health and physical hazards, as well as classification of mixtures?

- A. SDS/MSDS
- B. Hazard classification
- C. Hazard communication elements
- D. None of the above

7. Labels: Chemical manufacturers and importers will be required to provide a label that includes a harmonized signal word, pictogram, and hazard statement for each?

- A. Specific, detailed criteria
- B. Standardized label elements
- C. Hazard class and category
- D. None of the above

Oxidizing Gases

8. Which of the following means any gas which may, generally by providing oxygen, cause or contribute to the combustion of other material more than air does?

- A. Aerosols
- B. Oxidizing gas
- C. Ignition
- D. None of the above

3.1.6 Flammable Liquids

9. Which of the following means a liquid having a flash point of not more than 93°C?

- A. Flammable liquid
- B. Readily combustible solids
- C. Explosive, organic peroxides or as oxidizing
- D. None of the above

3.1.7 Flammable Solids

10. Which of the following are solids that are readily combustible, or may cause or contribute to fire through friction?

- A. Flammable liquid
- B. Flammable solids
- C. Explosive, organic peroxides or as oxidizing
- D. None of the above

3.1.8 Self-Reactive Substances

11. Which of the following are thermally unstable liquids or solids liable to undergo a strongly exothermic thermal decomposition even without participation of oxygen?

- A. Readily combustible solids
- B. Basis of the flash point
- C. Self-reactive substances
- D. None of the above

3.1.12 Substances which on Contact with Water Emit Flammable Gases

12. Substances that, in contact with water, emit flammable gases are solids or liquids which, by interaction with water, are liable to become spontaneously flammable or to give off _____ in dangerous quantities.

- A. Flammable solids
- B. Substances and mixtures
- C. Flammable gases
- D. None of the above

3.1.13 Oxidizing Liquids

13. Which of the following is a liquid which, while in itself not necessarily combustible, may, generally by yielding oxygen, cause or contribute to the combustion of other material?

- A. Combustible liquid
- B. Basis of the flash point
- C. An oxidizing liquid
- D. None of the above

3.1.14 Oxidizing Solids

14. An oxidizing solid is a solid which, while in itself not necessarily combustible, may, generally by yielding oxygen, cause or contribute to the?

- A. Combustion of other material
- B. Readily combustible solids
- C. Explosive, organic peroxides or as oxidizing
- D. None of the above

3.1.15 Organic Peroxides

15. The term also includes organic peroxide formulations, such substances and mixtures may: be liable to _____-; burn rapidly; be sensitive to impact or friction; react dangerously with other substances.

- A. Melt
- B. Corrode
- C. Explosive decomposition
- D. None of the above

Topic 6 – Advanced Safety Competency Assignment Common Pesticide/Herbicides A-L Section

1. Exposure to high amounts of which term can cause weakness, blurred vision, headache, nausea, tearing, sweating, and tremors in humans? Very high doses can be fatal to humans because it can paralyze the respiratory system.

- A. Brodifacoum
- B. Carbofuran
- C. Aldicarb
- D. None of the above

2. Which term is one of the most toxic carbamate pesticides? It is marketed under the trade names Furadan, by FMC Corporation and Curater, among several others. It is used to control insects in a wide variety of field crops, including potatoes, corn and soybeans.

- A. Aldicarb
- B. Carbofuran
- C. Cypermethrin
- D. None of the above

3. Which term has an especially long half-life in the body, which ranges to several months, requiring prolonged treatment with antidotal vitamin K for both human and pet poisonings?

- A. Acephate
- B. Carbofuran
- C. Brodifacoum
- D. None of the above

4. Which term can also cause acute toxicity in humans if anyone is exposed to it for long periods of time? It is also a known poison to water organisms.

- A. Deltamethrin
- B. Methiocarb
- C. Imidacloprid
- D. None of the above

5. Which term is used outdoors on lawns, ornamental gardens, golf courses, and indoors as a spot or crack and crevice treatment? In its purest form, deltamethrin is colorless or white to light beige crystals that have no odor.

- A. Deltamethrin
- B. Glyphosate
- C. Imidacloprid
- D. None of the above

6. Floramite, which contains the active ingredient _____ is labeled for control of a wide range of mites, including two-spotted spider mite, Pacific mite, strawberry mite, European red mite, citrus red mite, clover mite, southern red mite, spruce spider mite, and bamboo spider mite.
- A. Malathion C. Bifenazate
B. Chlordimeform D. None of the above
7. Which term is a nicotine-based, systemic insecticide, which acts as a neurotoxin and belongs to a class of chemicals called the neonicotinoids?
- A. Deltamethrin C. Imidacloprid
B. Glyphosate D. None of the above
8. Like other organophosphates, _____ is an anticholinesterase which disables cholinesterase, an enzyme essential for central nervous system function.
- A. Dimethoate C. Borate(s)
B. Carbaryl D. None of the above
9. Which term is a rodenticide which poisons the central nervous system by uncoupling mitochondrial oxidative phosphorylation, which causes a decrease in adenosine triphosphate (ATP) synthesis?
- A. Carbaryl C. Bromethalin
B. Permethrin D. None of the above
10. Which term is a chemical in the carbamate family used chiefly as an insecticide? It is a white crystalline solid commonly sold under the brand name Sevin, a trademark of the Bayer Company.
- A. 2,4-Dichlorophenoxyacetic Acid C. Carbaryl
B. Permethrin D. None of the above
11. Which term itself is of low toxicity; however, absorption or ingestion into the human body readily results in its metabolism to malaoxon, which is substantially more toxic?
- A. Malathion C. Bifenazate
B. Fenvalerate D. None of the above
12. Which term has a low persistence in soil? The half-life is 2 to 6 weeks. The symptoms associated with diazinon poisoning in humans include weakness, headaches, tightness in the chest, blurred vision, nonreactive pinpoint pupils, excessive salivation, sweating, nausea, vomiting, diarrhea, abdominal cramps, and slurred speech.
- A. Carbaryl C. Diazinon
B. Carbofuran D. None of the above
13. Which term is highly toxic to fish, bees and aquatic insects, according to the National Pesticides Telecommunications Network (NPTN)? It is found in many household ant and cockroach killers, including Raid and ant chalk.
- A. Aldicarb C. Cypermethrin
B. Acephate D. None of the above
14. Which term is an insecticide belonging to the pyrethroid family? Pyrethroids are the man-made versions of pyrethrins, natural insecticides from chrysanthemum flowers.
- A. Glyphosate C. Deltamethrin
B. Methiocarb D. None of the above

15. Which term is a widely used organophosphate insecticide used to kill insects on contact? It was patented and introduced in the 1950s by American Cyanamid.

- A. Dimethoate
- B. Diazinon
- C. Borate(s)
- D. None of the above

Topic 7 — Advanced Safety Competency Assignment

1. Which term is a commercial product commonly use petroleum distillates as carriers?

- A. Resmethrin
- B. Plant Penetrants
- C. Pyrethroid
- D. None of the above

2. Which term is a phthalimide-derived, non-systemic, organophosphate insecticide used on plants and animals?

- A. Chlordimeform
- B. Phosmet
- C. Resmethrin
- D. None of the above

3. Which term usually have a milky appearance?

- A. Emulsions
- B. Solutions
- C. Suspensions
- D. None of the above

4. This diatomic gas is an important cell signaling molecule in mammals, including humans. It is also an extremely important intermediate in the chemical industry.

- A. Chlordimeform
- B. Phosmet
- C. Nitric oxide
- D. None of the above

5. Which term is effective as an ovicide/insecticide for control of bollworm and tobacco budworm in cotton? Effective also for the control of resistant mites and their eggs, and many lepidopterous insect pests but not on current U.S. label

- A. Propoxur
- B. Phosmet
- C. Chlordimeform
- D. None of the above

6. Which term formulation usually contains a liquid active ingredient, one or more petroleum-based solvents (which give EC formulations their strong odor), and an agent that allows the formulation to be mixed with water to form an emulsion?

- A. Invert Emulsions
- B. Ultra-low Volume
- C. Emulsifiable Concentrates
- D. None of the above

7. Which term is the keystone to an economical, effective and flexible program to break and control mite development?

- A. Apollo SC
- B. Phosphamidon
- C. Paraquat
- D. None of the above

8. Which term is the trade name of one of the most widely used herbicides in the world?

- A. Chlordimeform
- B. Paraquat
- C. Resmethrin
- D. None of the above

9. Which term is a carbamate insecticide used to control aphids on vegetable, cereal and orchard crops by inhibiting acetylcholinesterase activity?

- A. Paraquat
- B. Phosmet
- C. Pirimicarb
- D. None of the above

10. To mimic the insecticidal activity of the natural compound _____ another class of pesticides, pyrethroid pesticides, has been developed. These are non-persistent, which is a sodium channel modulators, and are much less acutely toxic than organophosphates and carbamates. Compounds in this group are often applied against household pests.

- A. Pyrethrum
- B. Plant Penetrants
- C. Phosphamidon
- D. None of the above

11. Which term have been used as a means of killing rodents and are considered single-dose fast acting rodenticides (death occurs commonly within 1-3 days after single bait ingestion)? The acid in the digestive system of the rodent reacts with the phosphide to generate the toxic phosphine gas.

- A. Paraquat
- B. Metal Phosphides
- C. Propoxur
- D. None of the above

12. Which term are ready to use and require no further dilution before application? They consist of a small amount of active ingredient (often 1 percent or less per unit volume) dissolved in an organic solvent. They usually do not stain fabrics or have unpleasant odors.

- A. Baits
- B. Suspension
- C. Ready-to-use Low-concentrate Solutions
- D. None of the above

13. Which term formulations contain one or more active ingredients and a solvent? Most contain a low percentage of active ingredients.

- A. Aerosols
- B. Invert Emulsions
- C. Ready-to-use Low-concentrate Solutions
- D. None of the above

14. Which term can be divided into two types: ready-to-use and concentrates that must be mixed with water to be applied as a spray?

- A. Dry Formulations
- B. Dusts
- C. Tracking Powders
- D. None of the above

15. Which term concentrates may approach 100 percent active ingredient? They are designed to be used as is or to be diluted with only small quantities of a specified carrier and are used at rates of no more than 1/2 gallon per acre.

- A. Flowables/Liquids
- B. Ultra-low Volume
- C. Tracking Powders
- D. None of the above

Pesticide Safety Training CEU Training Assignment #2 Last Names H to M Only

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

We will require students to fax or e-mail a copy of their driver's license with the registration form.

Complete all topics before submitting the answers key.

15 final exam questions. (s) Means answer can be singular or plural.

Topic 1 - Pesticide Safety Introduction

Identify the proper definition.

1. A substance that is added to assist even distribution over the target.
A. Adjuvant(s) C. Spreaders
B. Surfactants D. None of the above
2. An organic solvent or mineral clay
A. Stickers C. Minor Purpose Adjuvants
B. Carrier D. None of the above
3. A chemical added that can be added to a liquid to reduce its surface tension and make the chemical more effective in spreading over and penetrating surfaces.
A. Inverting Agents C. Wetting Agent
B. Carrier D. None of the above
4. If the pesticide is alkaline labile but poorly water soluble, the formulation colloids will provide some protection from hydrolysis in the spray.
A. Adjuvant(s) C. Buffers
B. Surfactants D. None of the above
5. Pesticide products contain at least one active ingredient and other intentionally added inert ingredients.
A. Active ingredient C. Inert Ingredients
B. Surfactants D. None of the above
6. Too much surfactant may permit runoff or loss of deposit rather than increasing coverage.
A. Active ingredient C. Diluent
B. Wetter Spreaders D. None of the above

7. The amount of pesticide that remains in the environment after an application or a spill.
 A. Adsorption C. Residue
 B. Solubility D. None of the above
8. Is a measure of the ability of a pesticide to dissolve in a solvent, usually water?
 A. Adsorption C. Residue
 B. Solubility D. None of the above
9. A pesticide that adsorbs to soil particles is less likely to move from the spray site than one that does not adsorb tightly to soil.
 A. Active ingredient C. Persistence
 B. Adsorption D. None of the above

Pesticide Medias – Primary Delivery Systems: Identify the proper definition.

10. The amount of active ingredient is relatively low, usually ranging from less than 1 to 15 percent by weigh.
 A. Granules C. Dry or Solid Formulations
 B. Ultra-Low Volume (ULV) D. None of the above
11. When you drop these bags into a filled spray tank, they dissolve and release their contents to mix with the water.
 A. Water-Soluble Packets C. Liquid Formulations
 B. Ultra-Low Volume (ULV) D. None of the above

Six Basic IPM Components: Identify the components definition.

12. Should a pest reach an unacceptable level; mechanical methods are the first options to consider. They include simple hand-picking, erecting insect barriers, using traps, vacuuming, and tillage to disrupt breeding.
 A. Biological controls C. Acceptable pest levels
 B. Mechanical controls D. None of the above
13. IPM programs first work to establish acceptable pest levels, called action thresholds, and apply controls if those thresholds are crossed.
 A. Biological controls C. Acceptable pest levels
 B. Mechanical controls D. None of the above
14. Accurate pest identification is critical to a successful IPM program.
 A. Responsible Pesticide Use C. Preventive cultural practices
 B. Regular observation D. None of the above

Chemical Degradation

15. Temperature, moisture, pH and adsorption, in addition to the chemical and physical properties of the pesticide, determine which _____ take place and how quickly they occur.
 A. Microorganism(s) C. Chemical and physical properties
 B. Chemical reactions D. None of the above

Topic 2 – Proper Pesticide Handling Section Assignment

15 Multiple choice questions.

Mixing and Loading Pesticides

1. Which of the following occur when the chemicals are being mixed for use?
A. Handling pesticide waste(s) C. Many pesticide accidents
B. Prescribed by the pesticide label D. None of the above
2. One of the _____ related to pesticide-related illness, is the mixing and loading of concentrated chemicals, specifically low-volume and ultra-low volume formulations.
A. Prescribed by the pesticide label C. Most dangerous jobs
B. Potentially harmful D. None of the above
3. All pesticides are _____, particularly for those who work with them on a daily basis because of the potential for being exposed to large doses and the likelihood of chronic exposure.
A. Handling pesticide waste(s) C. Pesticide-related illness
B. Potentially harmful D. None of the above

Mixing Pesticides Summary

4. Always read and carefully follow label directions when _____. Even if you are familiar with a particular chemical, reread the label to ensure that you have the latest safety information.
A. Easy cleanups C. Mixing pesticides
B. Chronic exposures D. None of the above

Work in a Safe Area

5. The pesticide mixing and loading area should be well ventilated, well lighted, and downhill from any _____. Concrete slabs are ideal for mixing chemicals since they allow for easy cleanup.
A. Handling pesticide waste(s) C. Pesticide accidents
B. Water sources D. None of the above

Measure Chemicals Correctly

6. Measure and mix pesticides carefully. Never _____ except as directed by the label or chemical manufacturer. Do not use more chemical than prescribed by the pesticide label.
A. Handle pesticide waste(s) C. Have a pesticide accident
B. Mix different pesticides D. None of the above

Pesticide Spills

7. In spite of the most careful use and handling of pesticides, accidental spills and fires occasionally occur. These range in size from small spills of a household pesticide container to huge fires involving entire manufacturing warehouses filled with the _____.
A. Two (or more) pesticides C. 100 percent active ingredient(s)
B. Most toxic pesticides D. None of the above

Decontamination Supplies

8. Which of the following must make sure that decontamination supplies for washing off pesticide residues are provided to workers who are working in a pesticide-treated area and are doing tasks that involve contact with anything that has been treated with the pesticide, including soil, water, or surfaces of plants?

- A. Workers
- B. Worker employers
- C. Handler employers
- D. None of the above

Ready-to-Use Low-Concentrate Solutions (RTU)

9. Low-concentrate formulations are ready to use and require no further dilution before application. They consist of a _____ dissolved in an organic solvent. They usually do not stain fabrics or have unpleasant odors.

- A. Two (or more) pesticides
- B. Most toxic pesticides
- C. Small amount of active ingredient
- D. None of the above

Restricted-Entry Interval (REI)

10. Which of the following will have one REI, such as 12 hours, for all crops and uses? Other products have different REIs depending on the crop or method of application. When two (or more) pesticides are applied at the same time, and have different REIs, you must follow the longer interval.

- A. Organic solvent(s)
- B. Some pesticides
- C. Low-concentrate formulation(s)
- D. None of the above

WPS Requires Providing Decontamination Sites

11. Employers must establish a decontamination site for all workers and handlers for washing off pesticides and pesticide residues. A decontamination site must be within a quarter (1/4) mile of the?

- A. Different REIs
- B. Employees' work site
- C. Pesticide application
- D. None of the above

Emergency and First-Aid Procedures

12. Emergency procedures—know what to do in case of an emergency such as an accidental spill or exposure. The SDS (formerly MSDS) may also provide emergency phone numbers for reporting certain?

- A. Spills/releases
- B. Treated or restricted areas
- C. Drifting from nearby applications
- D. None of the above

Each WPS Safety Poster Must Convey to Workers and Handlers

13. How to help keep pesticides from getting on or into their bodies. The poster must include the following instructions: Avoid getting on your skin or into your body any pesticides that may be on plants and soil, in irrigation water, or from?

- A. Spills/releases
- B. Different REIs
- C. Drifting from nearby applications
- D. None of the above

Activated Charcoal

14. Which of the following can reduce the amount absorbed if given within 60 minutes, though there is not enough data to determine if it is effective if time from ingestion is prolonged?

- A. Syrup of ipecac
- B. Milk
- C. Activated charcoal
- D. None of the above

15. Which of the following is no longer recommended for most pesticide poisonings?
- A. Syrup of ipecac
 - B. Mecoprop
 - C. Activated charcoal
 - D. None of the above

Topic 3 – Personal Protection Section Post Quiz

Preparing to Apply Pesticides Preparation is essential for chemical safety.

Follow the steps below to properly prepare for pesticide application:

Plan ahead

1. Always read chemical labels before attempting to work with pesticides. Prepare for a possible emergency by maintaining a personal decontamination site, a chemical spill kit, and by knowing the proper first aid procedures associated with your _____.
- A. Good working order
 - B. Pesticide
 - C. Personal decontamination site
 - D. None of the above

Select Application Equipment

2. Choose _____ to properly apply pesticides. Before using the equipment, inspect it for good working order.
- A. Product label
 - B. Personal decontamination site
 - C. Suitable equipment
 - D. None of the above

Provide Prior Notification

3. Prior to applying pesticides, inform all people in or around the application area. Notification allows people to protect themselves from _____.
- A. Pesticide's toxicity
 - B. Product label
 - C. Harmful chemicals
 - D. None of the above

Pesticide Label Breakdown

Precautionary Statements

4. Hazard and precautionary statements that are not required on the front panel may appear on other panels of the label. These statements must appear together on the label under the heading "_____ " and under the appropriate subheadings.
- A. Active ingredient
 - B. Hazard
 - C. Precautionary Statements
 - D. None of the above

Personal Protective Equipment

5. All pesticide handlers—applicators, mixer/loaders, flaggers, and early-entry agricultural workers—are legally required to follow all PPE instructions that appear on the _____.
- A. Product label
 - B. Active ingredient
 - C. Highest/most toxic acute toxicity category
 - D. None of the above

Hazard = Toxicity x Exposure

6. Which of the following is a measure of its capacity or ability to cause injury or illness? The toxicity of a particular pesticide is determined by subjecting test animals to varying dosages of the active ingredient (a.i.) and each of its formulated products.
- A. Product label
 - B. The toxicity of a pesticide
 - C. Highest/most toxic acute toxicity category
 - D. None of the above

Acute Toxicity and Acute Effects

7. Acute toxicity of a pesticide refers to the chemical's ability to cause injury to a person or animal from a single exposure, generally of short duration. The harmful effects that occur from a single exposure by any route of entry are termed "_____."

- A. Acute effects
- B. Chronic toxicity of a pesticide
- C. Most serious pesticide poisoning(s)
- D. None of the above

Pesticide Poisoning

8. The most serious pesticide poisonings usually result from _____ to organophosphate and carbamate insecticides.

- A. Acute exposure
- B. Chronic toxicity
- C. Most serious pesticide poisoning(s)
- D. None of the above

Respirator Filters/Cartridges

9. The cartridges used for _____ must be either equipped with an end-of-service life indicator (ESLI) or a cartridge change schedule has to be established.

- A. Air-Line Respirators
- B. Half-Face Respirators
- C. Air-purifying respirators
- D. None of the above

10. There are _____ of filters for protection against particulates.

- A. Proper protection classes
- B. Few types
- C. Nine classes
- D. None of the above

Protection Factors

11. The protection factor of a respirator is based on the ratio of two concentrations: the _____ outside the respirator to the contaminant concentration inside the respirator.

- A. Atmosphere
- B. Oxygen level
- C. Contaminant concentration
- D. None of the above

Who Cannot Wear a Respirator?

12. Respirators cannot be worn when a person wears _____ that interferes with the seal of the face piece.

- A. Jewelry
- B. Other equipment
- C. Glasses or personal protective equipment
- D. None of the above

13. Respirators cannot be worn when a person has _____ that comes between the sealing surface of the face piece and the face or interferes with valve function.

- A. Clothing
- B. Other equipment
- C. Facial hair
- D. None of the above

Using up the air supply

14. When using a _____, keep checking the gauges and listening for alarms. Be ready to leave the area immediately if there is a problem.

- A. Respirator
- B. Full-Face Respirator
- C. SCBA
- D. None of the above

Panic

15. _____ is important when working in a hot, stressful, or awkward situation.

- A. A respirator
- B. Staying calm
- C. Following procedures
- D. None of the above

Topic 4 – Environmental Effects

1. Which of the following are simply the maximum amounts of pesticide permitted to be present on or in raw agricultural commodities?

- A. Tolerance(s)
- B. Pesticide permitted tolerances
- C. Pesticide contamination tolerances
- D. None of the above

2. Which of the following vary according to the pesticide and the crop?

- A. Tolerance(s)
- B. Persistent tolerances
- C. Pesticide contamination tolerances
- D. None of the above

Unwanted Environmental Effects of Pesticides

3. Most organochlorine pesticides (e.g., DDT, chlordane) are _____.

- A. Very persistent
- B. Pesticide permitted
- C. Pesticide contamination
- D. None of the above

4. Pyrethrins, and carbamate pesticides are _____.

- A. Pesticide permitted
- B. Persistent
- C. Non-selective
- D. None of the above

5. Pesticides in soils break down through _____ which depend on the structure of the soil, its moisture content, its pH, salinity and other factors.

- A. Sunshine
- B. Photography
- C. Chemical reactions
- D. None of the above

6. If use of a _____ is considered essential, it must be justified based on the relative benefits balanced against the relative harm. In the case of public health pesticides, the threat to human health is a necessary consideration.

- A. Nonpersistent pesticide
- B. Much less persistent pesticide
- C. Non-selective pesticide
- D. None of the above

7. Which of the following are particularly important when applying a pesticide to waxy or hairy leaves?

- A. Surfactants
- B. Spray droplet(s)
- C. Surfactant recommend a nonionic type
- D. None of the above

8. Which of the following are compatible with most pesticides, and most EPA-registered pesticides that require a surfactant recommend a nonionic type?

- A. Spray droplet(s)
- B. Spray drift
- C. Nonionic surfactants
- D. None of the above

9. Which of the following is an adjuvant that increases the adhesion of solid particles to target surfaces? These adjuvants can decrease the amount of pesticide that washes off during irrigation or rain.

- A. Windy condition(s)
- B. Spray drift
- C. Sticker(s)
- D. None of the above

Spray Drift

10. Another way in which 2,4-D injury can occur is by _____.

- A. Windy condition(s)
- B. Spray drift
- C. Sticker(s) drift
- D. None of the above

11. Which of the following means physical movement of spray droplets by wind?
 A. Spray drift C. Nonionic surfactants
 B. Vapor injury D. None of the above
12. Spraying during windy conditions and using nozzles and pressures that result in the creation of fine spray droplets increase the risk of _____.
 A. Spray droplet(s) C. Vapor injury
 B. Spray drift D. None of the above

Vapor Drift (Volatilization)

13. Most cases of 2,4-D injury to cotton result from _____ of an ester-containing formulation of 2,4-D.
 A. Windy condition(s) C. Sticker(s) spray
 B. Vapor drift D. None of the above
14. Hot temperatures, moist soils, and temperature inversions all increase the potential for _____.
 A. Spray drift C. Nonionic mist
 B. Vapor drift D. None of the above
15. Which of the following can be avoided by simply refraining from the use of ester-containing formulations of 2,4-D?
 A. Windy condition(s) C. Vapor drift
 B. Spray drift D. None of the above

Topic 5 –Hazard Communication Section
Revised Hazard Communication Program

1. New 2012 changes to OSHA's _____ are bringing the U.S. into alignment with the Globally Harmonized System of Classification and Labelling of Chemicals, improving safety and health protections for America's workers.
 A. Safety data sheets and labels C. Hazard Communication Standard
 B. Specific criteria D. None of the above
2. Which of the following provides a single set of harmonized criteria for classifying chemicals according to their health and physical hazards and specifies hazard communication elements for labelling and safety data sheets?
 A. SDS/MSDS C. Hazard communication elements
 B. Modified standard D. None of the above
3. It is important to know what chemicals are present and/or used, their hazards to human health and the environment, and the?
 A. Hazards to human health C. Means to control them
 B. Multiple safety data sheets D. None of the above

More on the Revised Hazard Communication Standard

4. Which of the following provides a common and coherent approach to classifying chemicals and communicating hazard information on labels and safety data sheets?
 A. Safety data sheets and labels C. Hazard Communication Standard (HCS)
 B. Specific criteria D. None of the above

Major changes to the Hazard Communication Standard

5. Which of the following provides specific criteria for classification of health and physical hazards, as well as classification of mixtures?

- A. Safety data sheets and labels
- B. Hazard classification
- C. Hazard Communication Standard (HCS)
- D. None of the above

6. Safety Data Sheets: Will now have a specified 16-section format.

Information and training: Employers are required to train workers by December 1, 2013 on the new labels elements and safety data sheets format to facilitate?

- A. Recognition and understanding
- B. Model regulation
- C. The Purple Book
- D. None of the above

7. Flammable liquid is another hazard that is covered by most existing systems. The coverage varies between existing systems within the U.S. and globally. This means that the same product can be non-hazardous or hazardous with?

- A. Different labels/SDSs
- B. Multiple safety data sheets
- C. Hazards to human health
- D. None of the above

8. In the area of trade, the need to comply with multiple regulations regarding _____ and labeling is costly and time-consuming.

- A. Hazard classification
- B. Safety Data Sheets
- C. Existing hazard communication regulatory schemes
- D. None of the above

Hazard Classification

9. Which of the following is used to indicate that only the intrinsic hazardous properties of substances and mixtures are considered?

- A. Self-classification
- B. The data used for classification
- C. Hazard classification
- D. None of the above

3.1 What are the GHS Physical Hazards?

10. Which of the following developed by the ILO and UNCETDG, were largely based on the existing criteria used by the UN Model Regulation on the Transport of Dangerous Goods?

- A. Physical hazards classification
- B. GHS criteria
- C. GHS physical hazard criteria
- D. None of the above

11. Which of the following for physical hazards are quantitative or semi-quantitative with multiple hazard levels within an endpoint. This is different from several of the existing systems that currently have qualitative criteria for various physical hazards.

- A. Physical hazards classification
- B. GHS criteria
- C. GHS physical hazard criteria
- D. None of the above

12. Which of the following is not a gas and which has a melting point or initial melting point of 20°C or less at standard pressure of 101.3 kPa?

- A. Physical hazards classification
- B. GHS criteria
- C. A liquid is a substance or mixture
- D. None of the above

3.1.1 Explosives

13. An explosive substance (or mixture) is a solid or liquid which is in itself capable by _____ of producing gas at such a temperature and pressure and at such a speed as to cause damage to the surroundings.

- A. Chemical reaction
- B. Single hazard category
- C. Ignition distance test
- D. None of the above

3.1.3 Flammable Aerosols

14. Aerosols are any gas compressed, liquefied or dissolved under pressure within a non-refillable container made of metal, glass or plastic, with or without?

- A. Aerosols
- B. Chemical heat of combustion
- C. A liquid, paste or powder
- D. None of the above

Oxidizing Gases

15. Which of the following means any gas which may, generally by providing oxygen, cause or contribute to the combustion of other material more than air does?

- A. Single hazard category
- B. Flammable gas
- C. Oxidizing gas
- D. None of the above

Topic 6 – Advanced Safety Competency Assignment Common Pesticide/Herbicides A-L Section

1. Which term is registered for use as both an insecticide and a repellent? Its products are used on clothing, shoes, bed nets, and camping gear.

- A. Borate(s)
- B. Permethrin
- C. 2,4-Dichlorophenoxyacetic Acid
- D. None of the above

2. Which term impregnates clothing such as pre-treated shoes, socks, and pants repel and kill ticks, mosquitoes, and other insects and retain this effect after repeated laundering?

- A. Carbaryl
- B. Permethrin
- C. Bromethalin
- D. None of the above

3. Which term is a generic term for compounds containing the elements boron and oxygen?

- A. Carbaryl
- B. Borate(s)
- C. Bromethalin
- D. None of the above

4. Which term can also cause acute toxicity in humans if anyone is exposed to it for long periods of time? It is also a known poison to water organisms.

- A. Deltamethrin
- B. Methiocarb
- C. Imidacloprid
- D. None of the above

5. Which term is effective as an ovicide/insecticide for control of bollworm and tobacco budworm in cotton? Effective also for the control of resistant mites and their eggs, and many lepidopterous insect pests but not on current U.S. label.

- A. Malathion
- B. Chlordimeform
- C. Fenthion
- D. None of the above

6. Which term is a nicotine-based, systemic insecticide, which acts as a neurotoxin and belongs to a class of chemicals called the neonicotinoids?

- A. Deltamethrin
- B. Jasmonate
- C. Imidacloprid
- D. None of the above

7. Which term is a rodenticide which poisons the central nervous system by uncoupling mitochondrial oxidative phosphorylation, which causes a decrease in adenosine triphosphate (ATP) synthesis? Decreased ATP ultimately results in increased intracranial pressure, which damages neuronal axons. This damage to the central nervous system can cause paralysis, convulsions, and death.

- A. Carbaryl
- B. Permethrin
- C. Bromethalin
- D. None of the above

8. Which term is a pesticide that is widely used in agriculture, residential landscaping, public recreation areas, and in public health pest control programs such as mosquito eradication? In the US, it is the most commonly used organophosphate insecticide.

- A. Malathion
- B. Fenvalerate
- C. Bifenazate
- D. None of the above

9. Which term is a chemical in the carbamate family used chiefly as an insecticide? It is a white crystalline solid commonly sold under the brand name Sevin, a trademark of the Bayer Company.

- A. Carbaryl
- B. Carbofuran
- C. Diazinon
- D. None of the above

10. Which term are produced from fatty acids and seem to promote the production of defense proteins that are used to fend off invading organisms? They are believed to also have a role in seed germination, and affect the storage of protein in seeds, and seem to affect root growth.

- A. Glyphosate
- B. Methiocarb
- C. Jasmonate(s)
- D. None of the above

11. Which term has a low persistence in soil? The half-life is 2 to 6 weeks. The symptoms associated with diazinon poisoning in humans include weakness, headaches, tightness in the chest, blurred vision, nonreactive pinpoint pupils, excessive salivation, sweating, nausea, vomiting, diarrhea, abdominal cramps, and slurred speech.

- A. Dimethoate
- B. Carbofuran
- C. Diazinon
- D. None of the above

12. Which term is highly toxic to fish, bees and aquatic insects, according to the National Pesticides Telecommunications Network (NPTN)? It is found in many household ant and cockroach killers, including Raid and ant chalk.

- A. Aldicarb
- B. Acephate
- C. Cypermethrin
- D. None of the above

13. Which term is an insecticide belonging to the pyrethroid family? Pyrethroids are the man-made versions of pyrethrins, natural insecticides from chrysanthemum flowers.

- A. Deltamethrin
- B. Methiocarb
- C. Imidacloprid
- D. None of the above

14. Which term is a widely used organophosphate insecticide used to kill insects on contact? It was patented and introduced in the 1950s by American Cyanamid.

- A. Dimethoate
- B. Diazinon
- C. Borate(s)
- D. None of the above

15. Which term is an organophosphate parasymphomimetic which binds irreversibly to cholinesterase? Is an insecticide of relatively low human toxicity; however recent studies have shown that children with higher levels of _____ in their urine seem to be at an increased risk of attention deficit hyperactivity disorder.

- A. Malathion
- B. Chlordimeform
- C. Bifenazate
- D. None of the above

Topic 7 — Advanced Safety Competency Assignment

1. Which term usually have a milky appearance?

- A. Emulsions
- B. Solution
- C. Suspension
- D. None of the above

2. Which term is effective as an ovicide/insecticide for control of bollworm and tobacco budworm in cotton? Effective also for the control of resistant mites and their eggs, and many lepidopterous insect pests but not on current U.S. label

- A. Chlordimeform
- B. Phosmet
- C. Resmethrin
- D. None of the above

3. Which term formulations are ready to use and contain a low percentage of active ingredients (usually 10 percent or less by weight), plus a very fine, dry inert carrier made from talc, chalk, clay, nut hulls, or volcanic ash?

- A. Baits
- B. Invert Emulsions
- C. Dusts
- D. None of the above

4. Which term formulation is an active ingredient mixed with food or another attractive substance?

- A. Invert Emulsions
- B. Solution
- C. Baits
- D. None of the above

5. Which term formulation usually contains a liquid active ingredient, one or more petroleum-based solvents (which give EC formulations their strong odor), and an agent that allows the formulation to be mixed with water to form an emulsion?

- A. Invert Emulsions
- B. Ultra-low Volume
- C. Emulsifiable Concentrates
- D. None of the above

6. Which term is the trade name of one of the most widely used herbicides in the world?

- A. Chlordimeform
- B. Paraquat
- C. Resmethrin
- D. None of the above

7. Which term is a viologen, is quick-acting and non-selective, killing green plant tissue on contact. It is also toxic to human beings and animals, and is linked to the development of Parkinson's disease.

- A. Metal Phosphides
- B. Phosphamidon
- C. Paraquat
- D. None of the above

8. Which term is a pyrethroid insecticide with many uses, including control of the adult mosquito population?

- A. Chlordimeform
- B. Paraquat
- C. Resmethrin
- D. None of the above

9. Which term are ready to use and require no further dilution before application? They consist of a small amount of active ingredient (often 1 percent or less per unit volume) dissolved in an organic solvent. They usually do not stain fabrics or have unpleasant odors.

- A. Baits
- B. Invert Emulsions
- C. Ready-to-use Low-concentrate Solutions
- D. None of the above

10. Which term contains a water-soluble pesticide dispersed in an oil carrier?

- A. Invert Emulsions
- B. Solution
- C. Suspension
- D. None of the above

11. Which term requires a special kind of emulsifier that allows the pesticide to be mixed with a large volume of petroleum-based carrier, usually fuel oil, aids in reducing drift?

- A. Invert Emulsions
- B. Solution
- C. Suspension
- D. None of the above

12. Which term formulations contain one or more active ingredients and a solvent? Most contain a low percentage of active ingredients.

- A. Aerosols
- B. Invert Emulsions
- C. Ready-to-use Low-concentrate Solutions
- D. None of the above

13. Which term can be divided into two types: ready-to-use and concentrates that must be mixed with water to be applied as a spray?

- A. Dry Formulations
- B. Dusts
- C. Tracking Powders
- D. None of the above

14. Which term results when a substance is dissolved in a liquid? The components of a true solution cannot be mechanically separated.

- A. Invert Emulsions
- B. Solution
- C. Suspension
- D. None of the above

15. Which term concentrates may approach 100 percent active ingredient? They are designed to be used as is or to be diluted with only small quantities of a specified carrier and are used at rates of no more than 1/2 gallon per acre.

- A. Flowables/Liquids
- B. Ultra-low Volume
- C. Invert Emulsions
- D. None of the above

Pesticide Safety Training CEU Training Assignment #3

Last Names N to S Only

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

We will require students to fax or e-mail a copy of their driver's license with the registration form.

Complete all topics before submitting the answers key.

15 final exam questions. (s) Means answer can be singular or plural.

Topic 1 - Pesticide Safety Introduction

Identify the proper definition.

1. A substance used to dilute something.
A. Active ingredient C. Diluent
B. Adjuvant(s) D. None of the above
2. A substance that is added to assist even distribution over the target.
A. Active ingredient C. Diluent
B. Spreaders D. None of the above
3. An organic solvent or mineral clay
A. Stickers C. Carrier
B. Inverting Agents D. None of the above
4. Stickers and spreaders
A. Adjuvant(s) C. Emulsifiable Oil Activators
B. Surfactants D. None of the above
5. These are special emulsifiers that can invert an oil/water emulsion, the usual type in pesticide formulations, to a water/oil emulsion, or invert emulsion that is very viscous or "mayonnaise-like".
A. Inverting Agents C. Wetting Agent
B. Carrier D. None of the above
6. Too much surfactant may permit runoff or loss of deposit rather than increasing coverage.
A. Adjuvant(s) C. Wetter Spreaders
B. Surfactants D. None of the above
7. The ability of a pesticide to remain present and active in its original form for a long time before breaking down.
A. Active ingredient C. Persistence
B. Residue D. None of the above

Pesticide Medias – Primary Delivery Systems: Identify the proper definition.

8. These are also effective in areas of poor sanitation where readily available food renders traditional baits ineffective.

- A. Fumigants
- B. Liquid Baits
- C. Soluble Powders
- D. None of the above

9. The amount of active ingredient is relatively low, usually ranging from less than 1 to 15 percent by weigh.

- A. Granules
- B. Water-Soluble Packets
- C. Dry or Solid Formulations
- D. None of the above

10. These formulations contain one or more active ingredients and a solvent. Most contain a low percentage of active ingredients.

- A. Fumigants
- B. Aerosols
- C. Liquid Baits
- D. None of the above

Six Basic IPM Components: Identify the components definition.

11. The emphasis is on control, not eradication. IPM holds that wiping out an entire pest population is often impossible, and the attempt can be economically expensive, environmentally unsafe, and frequently unachievable.

- A. Biological controls
- B. Mechanical controls
- C. Acceptable pest levels
- D. None of the above

12. Monitor the degree days of an environment to determine when is the optimal time for a specific insect's outbreak.

- A. Responsible Pesticide Use
- B. Acceptable pest levels
- C. Regular observation
- D. None of the above

Absorption or Uptake

13. Absorption of pesticides by _____ is influenced by environmental conditions and by the chemical and physical properties of the pesticide and the soil.

- A. The chemical structure
- B. Hydrolysis
- C. Target and non-target organisms
- D. None of the above

Pesticide Degradation

14. Pesticide degradation, or the breakdown of pesticides, usually is beneficial. Which of the following change most pesticide residues in the environment to nontoxic or harmless compounds?

- A. The chemical structure
- B. Pesticide-destroying reactions
- C. Water-insoluble pesticides
- D. None of the above

Adsorption

15. Which of the following tend to adsorb onto and within organic matter, making them even less bioavailable?

- A. The chemical structure
- B. Chemical and physical properties
- C. Water-insoluble pesticides
- D. None of the above

Topic 2 – Proper Pesticide Handling Section Assignment

15 Multiple choice questions.

Mixing and Loading Pesticides

1. All pesticides are _____, particularly for those who work with them on a daily basis because of the potential for being exposed to large doses and the likelihood of chronic exposure.

- A. Handling pesticide waste(s)
- B. Potentially harmful
- C. Many pesticide accidents
- D. None of the above

Pour Pesticides Carefully

2. Always wear eye protection and take care not to splash chemicals when _____. Never use your mouth to siphon pesticides.

- A. Handling waste(s)
- B. Pouring pesticides
- C. Pesticide-related illness
- D. None of the above

Work in a Safe Area

3. The pesticide mixing and loading area should be well ventilated, well lit, and downhill from any _____. Concrete slabs are ideal for mixing chemicals since they allow for easy cleanup.

- A. Handling pesticide waste(s)
- B. Water sources
- C. Pesticide accidents
- D. None of the above

Measure Chemicals Correctly

4. Measure and mix pesticides carefully. Never _____ except as directed by the label or chemical manufacturer. Do not use more chemical than prescribed by the pesticide label.

- A. Handle pesticide waste(s)
- B. Mix different pesticides
- C. Have a pesticide accident
- D. None of the above

Pesticide Wastes and Disposal Methods

5. Which of the following missing terms should be considered hazardous to the public, the people handling them and the environment?

- A. Waste materials
- B. Potentially harmful concerns
- C. All pesticide accidents
- D. None of the above

Pesticide Spills

6. In spite of the most careful use and handling of pesticides, accidental spills and fires occasionally occur. These range in size from small spills of a household pesticide container to huge fires involving entire manufacturing warehouses filled with the _____.

- A. Organic solvent(s)
- B. Most toxic pesticides
- C. 100 percent active ingredient(s)
- D. None of the above

Decontamination Supplies

7. Which of the following must make sure that decontamination supplies for washing off pesticide residues are provided to workers who are working in a pesticide-treated area and are doing tasks that involve contact with anything that has been treated with the pesticide, including soil, water, or surfaces of plants?

- A. Handler employers
- B. Applicators
- C. Worker employers
- D. None of the above

Ready-to-Use Low-Concentrate Solutions (RTU)

8. Low-concentrate formulations are ready to use and require no further dilution before application. They consist of a _____ dissolved in an organic solvent. They usually do not stain fabrics or have unpleasant odors.

- A. Organic solvent(s)
- B. Most toxic pesticides
- C. Small amount of active ingredient
- D. None of the above

Ultra-low Volume (ULV)

9. These concentrates may approach 100 percent active ingredient. They are designed to be used as is or to be diluted with only small quantities of a specified carrier and are used at rates of no more than 1/2 gallon per acre. These _____ are used mostly in outdoor applications, such as in agricultural, forestry, ornamental, and mosquito control programs.

- A. Special purpose formulations
- B. Two (or more) pesticides
- C. Low-concentrate formulation(s)
- D. None of the above

Restricted-Entry Interval (REI)

10. Which of the following will have one REI, such as 12 hours, for all crops and uses? Other products have different REIs depending on the crop or method of application. When two (or more) pesticides are applied at the same time, and have different REIs, you must follow the longer interval.

- A. Organic solvent(s)
- B. Some pesticides
- C. Low-concentrate formulation(s)
- D. None of the above

WPS Requires Providing Decontamination Sites

11. Employers must establish a decontamination site for all workers and handlers for washing off pesticides and pesticide residues. A decontamination site must be within a quarter (1/4) mile of the?

- A. Spills/releases
- B. Employees' work site
- C. Drifting from nearby applications
- D. None of the above

Emergency and First-Aid Procedures

12. Emergency procedures—know what to do in case of an emergency such as an accidental spill or exposure. The SDS (formerly MSDS) may also provide emergency phone numbers for reporting certain?

- A. Spills/releases
- B. Different REIs
- C. Drifting from nearby applications
- D. None of the above

Each WPS Safety Poster Must Convey to Workers and Handlers

13. How to help keep pesticides from getting on or into their bodies. The poster must include the following instructions: Avoid getting on your skin or into your body any pesticides that may be on plants and soil, in irrigation water, or from?

- A. Spills/releases
- B. Treated or restricted areas
- C. Drifting from nearby applications
- D. None of the above

Activated Charcoal

14. Activated charcoal is sometimes administered because it has been shown to be successful with some?

- A. Syrups of ipecac
- B. Liquids
- C. Pesticides
- D. None of the above

15. Which of the following is no longer recommended for most pesticide poisonings?
- A. Syrup of ipecac
 - B. Mecoprop
 - C. Activated charcoal
 - D. None of the above

Topic 3 – Personal Protection Section Post Quiz

Personal Protective Equipment

1. All pesticide handlers—applicators, mixer/loaders, flaggers, and early-entry agricultural workers—are legally required to follow all PPE instructions that appear on the _____.
- A. Product label
 - B. Restricted use chemical(s)
 - C. Highest/most toxic acute toxicity category
 - D. None of the above
2. A _____ lists the minimum PPE that a person must wear while performing handling or early-entry activities. Once the correct toxicity category has been established, the product-specific handler PPE can be identified.
- A. Active ingredient
 - B. Toxicity Category I
 - C. Pesticide label
 - D. None of the above

Hazard = Toxicity x Exposure

3. Which of the following is a measure of its capacity or ability to cause injury or illness? The toxicity of a particular pesticide is determined by subjecting test animals to varying dosages of the active ingredient (a.i.) and each of its formulated products.
- A. Restricted use chemical(s)
 - B. Active ingredient
 - C. The toxicity of a pesticide
 - D. None of the above
4. Which of the following is the chemical component in the pesticide product that controls the pest?
- A. Active ingredient
 - B. Hazard
 - C. Most serious pesticide poisoning(s)
 - D. None of the above
5. By understanding the difference in toxicity levels of pesticides, a user can minimize the potential hazard by selecting the _____ that will control the pest.
- A. Product label
 - B. Active ingredient
 - C. Pesticide with the lowest toxicity
 - D. None of the above

Acute Toxicity and Acute Effects

6. Acute toxicity of a pesticide refers to the chemical's ability to cause injury to a person or animal from a single exposure, generally of short duration. The harmful effects that occur from a single exposure by any route of entry are termed "_____."
- A. Acute effects
 - B. Toxicity Category I
 - C. Hazard
 - D. None of the above
7. Which of the following is determined by examining the dermal toxicity, inhalation toxicity, and oral toxicity of test animals. In addition, eye and skin irritation are also examined?
- A. Acute toxicity
 - B. Active ingredient
 - C. Highest/most toxic acute toxicity category
 - D. None of the above

Pesticide Poisoning

8. The most serious pesticide poisonings usually result from _____ to organophosphate and carbamate insecticides.
- A. Acute exposure
 - B. Toxicity Category I
 - C. Acute toxicity of a pesticide
 - D. None of the above

Respiratory Protection Sub-Section Types of Respirators

9. _____ is a type of respirator worn over the nose and mouth to protect the respiratory system from certain nuisance dusts, mists, etc.
- A. An Air-Line Respirator
 - B. A Full-Face Respirator
 - C. A Disposable Dust Mask
 - D. None of the above
10. Dust masks cannot be fit tested, are generally single use, are not recognized as proper respiratory protection, and may not be worn if a _____ exists.
- A. Proper respirator
 - B. Wearer's breathing zone
 - C. Potential for overexposure
 - D. None of the above
11. _____ have interchangeable filter cartridges and can protect the respiratory system from hazardous dusts, fumes, mists, etc.
- A. Full-Face Respirators
 - B. Half-Face Respirators
 - C. Air masks
 - D. None of the above

Protection Factors

12. The protection factor of a respirator is based on the ratio of two concentrations: the _____ outside the respirator to the contaminant concentration inside the respirator.
- A. Atmosphere
 - B. Contaminant concentration
 - C. Person's facial features
 - D. None of the above
13. Respirators cannot be worn when a person wears _____ that interferes with the seal of the face piece.
- A. Jewelry
 - B. Other equipment
 - C. Glasses or personal protective equipment
 - D. None of the above
14. Respirators cannot be worn when a person has _____ that comes between the sealing surface of the face piece and the face or interferes with valve function.
- A. Clothing
 - B. Jewelry
 - C. Facial hair
 - D. None of the above
15. Respirators cannot be worn when a person has a breathing problem, a heart condition, or is _____.
- A. Heat sensitive
 - B. Present
 - C. Stable on their feet
 - D. None of the above

Topic 4 – Environmental Effects

1. Which of the following are found in soil and air, and in surface and ground water across the countries, and urban pesticide uses contribute to the problem?
- A. Nonpersistent residues
 - B. Pesticide residues
 - C. Non-selective pesticide residues
 - D. None of the above

2. Which of the following represent levels of pesticide residues which scientists have determined may safely remain on the food crop without injury to the consumer?

- A. Tolerance(s)
- B. Non-selective tolerances
- C. Pesticide contamination tolerances
- D. None of the above

3. When pesticide tolerances are found to be exceed _____, the agricultural commodities involved may be seized and destroyed.

- A. Legal tolerance(s)
- B. Non-selective tolerances
- C. Pesticide contamination tolerances
- D. None of the above

Unwanted Environmental Effects of Pesticides

4. Most of the organophosphates (e.g., parathion, Malathion) and pyrethroids are _____.

- A. Very persistent
- B. Much less persistent
- C. Non-target organisms of pesticides
- D. None of the above

5. Once in the soil, organic pesticides may be rapidly broken down by _____ or they may remain unchanged for years.

- A. Natural processes
- B. Sunshine
- C. Absorption
- D. None of the above

6. By definition, pesticides that harm non-target organism populations significantly are _____.

- A. Pesticide contamination
- B. Non-selective
- C. Pesticide persistent
- D. None of the above

7. Which of the following work best with nozzles that reduce the number of fine and mist-like drops? To be effective and safe, nozzles may need to be changed for different pesticide applications.

- A. Drift control adjuvants
- B. Spray droplet(s)
- C. Surfactant recommend a nonionic type
- D. None of the above

8. Which of the following are particularly important when applying a pesticide to waxy or hairy leaves?

- A. Surfactants
- B. Spray drift
- C. Spray droplet(s)
- D. None of the above

9. Which of the following is an adjuvant that increases the adhesion of solid particles to target surfaces? These adjuvants can decrease the amount of pesticide that washes off during irrigation or rain.

- A. Windy condition(s)
- B. Spray drift
- C. Sticker(s)
- D. None of the above

Spray Drift

10. Another way in which 2,4-D injury can occur is by _____.

- A. Spray drift
- B. Vapor injury
- C. Nonionic surfactants
- D. None of the above

11. Which of the following means physical movement of spray droplets by wind?

- A. Windy condition(s)
- B. Spray drift
- C. Sticker(s) drift
- D. None of the above

12. Spraying during windy conditions and using nozzles and pressures that result in the creation of fine spray droplets increase the risk of _____.
- A. Spray droplet(s) C. Vapor injury
B. Spray drift D. None of the above

Vapor Drift (Volatilization)

13. Most cases of 2,4-D injury to cotton result from _____ of an ester-containing formulation of 2,4-D.
- A. Windy condition(s) C. Spray drift
B. Vapor drift D. None of the above
14. Which of the following injury results when the herbicide volatilizes and the vapors move to a susceptible crop such as cotton?
- A. Sticker(s) C. Mist
B. Vapor drift D. None of the above
15. Hot temperatures, moist soils, and temperature inversions all increase the potential for _____.
- A. Spray drift C. Vapor drift
B. Windy condition(s) D. None of the above

Topic 5 – Hazard Communication Section

Revised Hazard Communication Program

1. Which of the following allowed chemical manufacturers and importers to convey hazard information on labels and material safety data sheets in whatever format they chose?
- A. Old standard C. Right to understand
B. Hazardous chemicals D. None of the above
2. Which of the following provides a single set of harmonized criteria for classifying chemicals according to their health and physical hazards and specifies hazard communication elements for labelling and safety data sheets?
- A. Safety data sheets and labels C. Modified standard
B. Specific criteria D. None of the above
3. The Safety Data Sheet is at the heart of federal OSHA's?
- A. Right to understand C. Hazard communication standard (HazCom)
B. Hazard information D. None of the above
4. Which of the following is a detailed, written description of a hazardous chemical that must be kept in the workplace where such chemicals are used?
- A. SDS/MSDS C. Hazard communication elements
B. Hazard Communication Standard (HCS) D. None of the above

3.1 What are the GHS Physical Hazards?

5. Which of the following developed by the ILO and UNCETDG, were largely based on the existing criteria used by the UN Model Regulation on the Transport of Dangerous Goods?
- A. Physical hazards classification C. GHS physical hazard criteria
B. GHS criteria D. None of the above

6. Which of the following is for physical hazards are quantitative or semi-quantitative with multiple hazard levels within an endpoint? This is different from several of the existing systems that currently have qualitative criteria for various physical hazards.

- A. Physical hazards classification
- B. GHS criteria
- C. GHS physical hazard criteria
- D. None of the above

7. In developing GHS criteria for _____ it was necessary to define physical states.

- A. GHS criteria
- B. Physical hazards
- C. Scope of the GHS includes all target audiences
- D. None of the above

8. Which of the following is not a gas and which has a melting point or initial melting point of 20°C or less at standard pressure of 101.3 kPa?

- A. Physical hazards classification
- B. A solid is a substance or mixture
- C. A liquid is a substance or mixture
- D. None of the above

3.1.2 Flammable Gases

9. Which of the following means a gas having a flammable range in air at 20°C and a standard pressure of 101.3 kPa?

- A. Single hazard category
- B. Flammable gas
- C. Chemical heat of combustion
- D. None of the above

10. Which of the following of this hazard class are assigned to one of two hazard categories on the basis of the outcome of the test or calculation method?

- A. Flammable components
- B. Substances and mixtures
- C. Solid or liquid particles
- D. None of the above

3.1.3 Flammable Aerosols

11. Aerosols are any gas compressed, liquefied or dissolved under pressure within a non-refillable container made of metal, glass or plastic, with or without?

- A. Single hazard category
- B. A liquid, paste or powder
- C. Chemical heat of combustion
- D. None of the above

12. The container is fitted with a release device allowing the contents to be ejected as solid or liquid particles in suspension in a gas, as a foam, paste or powder or?

- A. Substances and mixtures
- B. In a liquid or gaseous state
- C. Exothermic chemical reactions
- D. None of the above

Oxidizing Gases

13. Which of the following means any gas which may, generally by providing oxygen, cause or contribute to the combustion of other material more than air does?

- A. Aerosols
- B. Flammable gas
- C. Oxidizing gas
- D. None of the above

3.1.5 Gases under Pressure

14. Which of the following under pressure are gases that are contained in a receptacle at a pressure not less than 280 Pa at 20°C or as a refrigerated liquid?

- A. Flammable solids
- B. Gases
- C. Substances and mixtures of this hazard class
- D. None of the above

3.1.6 Flammable Liquids

15. Flammable liquid means a liquid having a flash point of not more than 93°C. Substances and mixtures of this hazard class are assigned to one of four hazard categories on the basis of the flash point and boiling point.

- A. True B. False

Topic 6 – Advanced Safety Competency Assignment

Common Pesticide/Herbicides A-L Section

1. Which term is an organophosphate foliar insecticide of moderate persistence with residual systemic activity of about 10-15 days at the recommended use rate?

- A. Aldicarb C. Cypermethrin
B. Acephate D. None of the above

2. Which term is a carbamate insecticide which is the active substance in the pesticide Temik?

- A. Aldicarb C. Acephate
B. Carbofuran D. None of the above

3. Exposure to high amounts of which term can cause weakness, blurred vision, headache, nausea, tearing, sweating, and tremors in humans? Very high doses can be fatal to humans because it can paralyze the respiratory system.

- A. Aldicarb C. Cypermethrin
B. Carbofuran D. None of the above

4. Which term and its derivatives are lipid-based hormone signals that regulate a wide range of processes in plants, ranging from growth and photosynthesis to reproductive development? In particular, these are critical for plant defense against herbivory and plant responses to poor environmental conditions and other kinds of abiotic and biotic challenges.

- A. Deltamethrin C. Imidacloprid
B. Jasmonate(s) D. None of the above

5. Like other organophosphates, _____ is an anticholinesterase which disables cholinesterase, an enzyme essential for central nervous system function.

- A. Dimethoate C. Borate(s)
B. Carbofuran D. None of the above

6. Which term is an organothiophosphate insecticide, avicide, and acaricide? Like most other organophosphates, its mode of action is via cholinesterase inhibition.

- A. Fenvalerate C. Fenthion
B. Chlordimeform D. None of the above

7. Which term is a chemical in the carbamate family used chiefly as an insecticide? It is a white crystalline solid commonly sold under the brand name Sevin, a trademark of the Bayer Company.

- A. Carbaryl C. Bromethalin
B. Borate(s) D. None of the above

8. Which term is a pesticide that is widely used in agriculture, residential landscaping, public recreation areas, and in public health pest control programs such as mosquito eradication? In the US, it is the most commonly used organophosphate insecticide.

- A. Malathion C. Bifenazate
B. Chlordimeform D. None of the above

9. Which term itself is of low toxicity; however, absorption or ingestion into the human body readily results in its metabolism to malaoxon, which is substantially more toxic?

- A. Malathion
- B. Fenvalerate
- C. Bifenazate
- D. None of the above

10. Which term is a broad-spectrum systemic herbicide used to kill weeds, especially annual broadleaf weeds and grasses known to compete with crops grown widely across the Midwest of the United States?

- A. Deltamethrin
- B. Glyphosate
- C. Imidacloprid
- D. None of the above

11. Which term are produced from fatty acids and seem to promote the production of defense proteins that are used to fend off invading organisms? They are believed to also have a role in seed germination, and affect the storage of protein in seeds, and seem to affect root growth.

- A. Deltamethrin
- B. Methiocarb
- C. Jasmonate(s)
- D. None of the above

12. Which term kills insects by inhibiting acetylcholinesterase, an enzyme necessary for proper nervous system function?

- A. Carbaryl
- B. Carbofuran
- C. Diazinon
- D. None of the above

13. Which term has a low persistence in soil? The half-life is 2 to 6 weeks. The symptoms associated with diazinon poisoning in humans include weakness, headaches, tightness in the chest, blurred vision, nonreactive pinpoint pupils, excessive salivation, sweating, nausea, vomiting, diarrhea, abdominal cramps, and slurred speech.

- A. Dimethoate
- B. Diazinon
- C. Borate(s)
- D. None of the above

14. Which term is a widely used organophosphate insecticide used to kill insects on contact? It was patented and introduced in the 1950s by American Cyanamid.

- A. Dimethoate
- B. Carbaryl
- C. Borate(s)
- D. None of the above

15. Which term is an organophosphate parasympathomimetic which binds irreversibly to cholinesterase? Is an insecticide of relatively low human toxicity; however recent studies have shown that children with higher levels of _____ in their urine seem to be at an increased risk of attention deficit hyperactivity disorder.

- A. Malathion
- B. Fenvalerate
- C. Bifenazate
- D. None of the above

Topic 7 — Advanced Safety Competency Assignment

1. Which term is a commercial product commonly use petroleum distillates as carriers?

- A. Pyrethroids
- B. Plant Penetrants
- C. Pyrethroid
- D. None of the above

2. Which term is a phthalimide-derived, non-systemic, organophosphate insecticide used on plants and animals?

- A. Chlordimeform
- B. Phosmet
- C. Resmethrin
- D. None of the above

3. Which term usually have a milky appearance?
 A. Emulsions C. Suspension
 B. Solution D. None of the above
4. Which term is a broad-spectrum pyrethroid insecticide? It is available in dusts, emulsifiable concentrates, smokes, ULV concentrates, and wetttable-powder formulations.
 A. Chlordimeform C. Permethrin
 B. Paraquat D. None of the above
5. Special dusts known as _____ are used for rodent and insect monitoring and control.
 A. Flowables/Liquids C. Tracking Powders
 B. Invert Emulsions D. None of the above
6. Which term formulation is an active ingredient mixed with food or another attractive substance?
 A. Baits C. Ready-to-use Low-concentrate Solutions
 B. Invert Emulsions D. None of the above
7. Which term is a viologen, is quick-acting and non-selective, killing green plant tissue on contact. It is also toxic to human beings and animals, and is linked to the development of Parkinson's disease.
 A. Paraquat C. Pyrethroids
 B. Phosphamidon D. None of the above
8. Which term is a carbamate insecticide used to control aphids on vegetable, cereal and orchard crops by inhibiting acetylcholinesterase activity?
 A. Chlordimeform C. Pirimicarb
 B. Phosmet D. None of the above
9. To mimic the insecticidal activity of the natural compound _____ another class of pesticides, pyrethroid pesticides, has been developed. These are non-persistent, which is a sodium channel modulators, and are much less acutely toxic than organophosphates and carbamates. Compounds in this group are often applied against household pests.
 A. Pyrethrum C. Phosphamidon
 B. Propoxur D. None of the above
10. Which term is an inorganic chemical compound?
 A. Chlordimeform C. Zinc Phosphide
 B. Paraquat D. None of the above
11. Which term is a carbamate insecticide and was introduced in 1959? It is a non-systemic insecticide with a fast knockdown and long residual effect used against turf, forestry, and household pests and fleas.
 A. Chlordimeform C. Propoxur
 B. Phosmet D. None of the above

12. Which term are ready to use and require no further dilution before application? They consist of a small amount of active ingredient (often 1 percent or less per unit volume) dissolved in an organic solvent. They usually do not stain fabrics or have unpleasant odors.

- A. Invert Emulsions
- B. Suspension
- C. Ready-to-use Low-concentrate Solutions
- D. None of the above

13. Which term contains a water-soluble pesticide dispersed in an oil carrier?

- A. Suspension
- B. Solution
- C. Invert Emulsions
- D. None of the above

14. Which term attracts the pests or is placed where the pests will find it. Pests are killed by eating the bait that contains the pesticide?

- A. Baits
- B. Solutions
- C. Suspensions
- D. None of the above

15. Which term concentrates may approach 100 percent active ingredient? They are designed to be used as is or to be diluted with only small quantities of a specified carrier and are used at rates of no more than 1/2 gallon per acre.

- A. Flowables/Liquids
- B. Ultra-low Volume
- C. Tracking Powders
- D. None of the above

Pesticide Safety Training CEU Training Assignment #4 Last Names T to Z Only

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

We will require students to fax or e-mail a copy of their driver's license with the registration form.

Complete all topics before submitting the answers key.

15 final exam questions. (s) Means answer can be singular or plural.

Topic 1 - Pesticide Safety Introduction

Identify the proper definition.

1. A substance used to dilute something.
A. Diluent C. Adjuvant(s)
B. Surfactants D. None of the above
2. A substance that is added to assist even distribution over the target.
A. Active ingredient C. Spreaders
B. Surfactants D. None of the above
3. An organic solvent or mineral clay
A. Sticker C. Minor Purpose Adjuvants
B. Carrier D. None of the above
4. If the pesticide is alkaline labile but poorly water soluble, the formulation colloids will provide some protection from hydrolysis in the spray.
A. Adjuvant(s) C. Buffers
B. Surfactants D. None of the above
5. Pesticide products contain at least one active ingredient and other intentionally added inert ingredients.
A. Active ingredient C. Inert Ingredients
B. Adjuvant(s) D. None of the above
6. Too much surfactant may permit runoff or loss of deposit rather than increasing coverage.
A. Adjuvant(s) C. Wetter Spreaders
B. Surfactants D. None of the above

Pesticide Medias – Primary Delivery Systems: Identify the proper definition.

7. These are also effective in areas of poor sanitation where readily available food renders traditional baits ineffective.

- A. Liquid Baits
- B. Soluble Powders
- C. Wettable Powders
- D. None of the above

8. The amount of active ingredient is relatively low, usually ranging from less than 1 to 15 percent by weigh.

- A. Granules
- B. Water-Soluble Packets
- C. Dry or Solid Formulations
- D. None of the above

9. When you drop these bags into a filled spray tank, they dissolve and release their contents to mix with the water.

- A. Granules
- B. Water-Soluble Packets
- C. Dry or Solid Formulations
- D. None of the above

10. These special purpose formulations are used mostly in outdoor applications, such as in agricultural, forestry, ornamental, and mosquito control programs.

- A. Water-Soluble Packets
- B. Ultra-Low Volume (ULV)
- C. Liquid Formulations
- D. None of the above

Six Basic IPM Components: Identify the components definition.

11. The emphasis is on control, not eradication. IPM holds that wiping out an entire pest population is often impossible, and the attempt can be economically expensive, environmentally unsafe, and frequently unachievable.

- A. Responsible Pesticide Use
- B. Acceptable pest levels
- C. Preventive cultural practices
- D. None of the above

Biological Degradation

12. Microorganisms have developed many enzymes that can break down _____. Modern scientists, though, have created pesticides with chemical structures not found in nature. These unique structures are often responsible for a pesticide's effectiveness and also explain why pesticides can persist in the environment.

- A. The chemical structure
- B. Natural compounds
- C. Water-insoluble pesticides
- D. None of the above

13. Which of the following largely depends on its chemical structure and on the presence of unusual functional groups, which are large sub-structures within the pesticide molecule?

- A. The chemical structure
- B. Pesticide-organic matter interaction
- C. A pesticide's environmental persistence
- D. None of the above

Adsorption

14. Which of the following tend to adsorb onto and within organic matter, making them even less bioavailable?

- A. The chemical structure
- B. Chemical and physical properties
- C. Water-insoluble pesticides
- D. None of the above

Chemical Degradation

15. Temperature, moisture, pH and adsorption, in addition to the chemical and physical properties of the pesticide, determine which _____ take place and how quickly they occur.

- A. The chemical structure
- B. Chemical reactions
- C. Water-insoluble pesticides
- D. None of the above

Topic 2 – Proper Pesticide Handling Section Assignment 15 Multiple choice questions.

Mixing and Loading Pesticides

1. All pesticides are _____, particularly for those who work with them on a daily basis because of the potential for being exposed to large doses and the likelihood of chronic exposure.

- A. Prescribed by the pesticide label
- B. Potentially harmful
- C. Pesticide-related illness
- D. None of the above

2. One of the _____ related to pesticide-related illness, is the mixing and loading of concentrated chemicals, specifically low-volume and ultra-low volume formulations.

- A. Pesticide accidents.
- B. Potentially harmful
- C. Most dangerous jobs
- D. None of the above

Measure Chemicals Correctly

3. Measure and mix pesticides carefully. Never _____ except as directed by the label or chemical manufacturer. Do not use more chemical than prescribed by the pesticide label.

- A. Handle pesticide waste(s)
- B. Tell anyone about a pesticide-related illness
- C. Mix different pesticides
- D. None of the above

Pesticide Wastes and Disposal Methods

4. Deciding how to dispose of pesticide wastes should be done on a case-by-case basis. Materials that meet the legal requirements as hazardous wastes (some pesticides, used crankcase oil, used antifreeze, etc.) must be disposed of according to _____.

- A. Handling pesticide waste(s) person
- B. Special rules
- C. OCEAN
- D. None of the above

Rinsing Helps Protect the Environment

5. When contamination occurs, plants and animals may be harmed and water supplies affected. Prevention of environmental contamination is always better than cleanup. Rinsing also helps in reducing the problem of _____.

- A. Handling pesticide waste(s)
- B. Hiding evidence
- C. Many pesticide accidents
- D. None of the above

Pesticide Spills

6. Intelligent planning, knowledge of the chemicals involved and calm consideration of the _____ to be dealt with during the emergency will reduce the risk and damage resulting from the accident.

- A. Organic solvent(s)
- B. Most toxic pesticides
- C. Actual hazards
- D. None of the above

Decontamination Supplies

7. Which of the following must make sure that decontamination supplies for washing off pesticide residues are provided to workers who are working in a pesticide-treated area and are doing tasks that involve contact with anything that has been treated with the pesticide, including soil, water, or surfaces of plants?

- A. Handlers
- B. Applicators
- C. Worker employers
- D. None of the above

Ultra-low Volume (ULV)

8. These concentrates may approach 100 percent active ingredient. They are designed to be used as is or to be diluted with only small quantities of a specified carrier and are used at rates of no more than 1/2 gallon per acre. These _____ are used mostly in outdoor applications, such as in agricultural, forestry, ornamental, and mosquito control programs.

- A. Low-concentrate formulation(s)
- B. Two (or more) pesticides
- C. Special purpose formulations
- D. None of the above

Restricted-Entry Interval (REI)

9. Which of the following will have one REI, such as 12 hours, for all crops and uses? Other products have different REIs depending on the crop or method of application. When two (or more) pesticides are applied at the same time, and have different REIs, you must follow the longer interval.

- A. Organic solvent(s)
- B. Some pesticides
- C. Low-concentrate formulation(s)
- D. None of the above

WPS Requires Providing Decontamination Sites

10. Employers must establish a decontamination site for all workers and handlers for washing off pesticides and pesticide residues. A decontamination site must be within a quarter (1/4) mile of the?

- A. Spills/releases
- B. Employees' work site
- C. Pesticide application
- D. None of the above

Emergency and First-Aid Procedures

11. Emergency procedures—know what to do in case of an emergency such as an accidental spill or exposure. The SDS (formerly MSDS) may also provide emergency phone numbers for reporting certain?

- A. Spills/releases
- B. Different REIs
- C. Drifting from nearby applications
- D. None of the above

Each WPS Safety Poster Must Convey to Workers and Handlers

12. How to help keep pesticides from getting on or into their bodies. The poster must include the following instructions: Avoid getting on your skin or into your body any pesticides that may be on plants and soil, in irrigation water, or from?

- A. Spills/releases
- B. Different REIs
- C. Drifting from nearby applications
- D. None of the above

Activated Charcoal

13. Activated charcoal is sometimes administered because it has been shown to be successful with some?

- A. Pesticides
- B. Liquids
- C. Mecoprops
- D. None of the above

14. Which of the following can reduce the amount absorbed if given within 60 minutes, though there is not enough data to determine if it is effective if time from ingestion is prolonged?

- A. Syrup of ipecac
- B. Milk
- C. Activated charcoal
- D. None of the above

15. Which of the following is no longer recommended for most pesticide poisonings?

- A. Syrup of ipecac
- B. Water
- C. Activated charcoal
- D. None of the above

Topic 3 – Personal Protection Section Post Quiz

Preparing to Apply Pesticides Preparation is essential for chemical safety.

Follow the steps below to properly prepare for pesticide application:

Plan ahead

1. Always read chemical labels before attempting to work with pesticides. Prepare for a possible emergency by maintaining a personal decontamination site, a chemical spill kit, and by knowing the proper first aid procedures associated with your _____.

- A. Personal decontamination site
- B. Harmful chemicals
- C. Pesticide
- D. None of the above

Select Application Equipment

2. Choose _____ to properly apply pesticides. Before using the equipment, inspect it for good working order.

- A. Suitable equipment
- B. Pesticide's toxicity
- C. Personal decontamination site
- D. None of the above

Provide Prior Notification

3. Prior to applying pesticides, inform all people in or around the application area. Notification allows people to protect themselves from _____.

- A. Personal decontamination site
- B. Harmful chemicals
- C. Pesticide's toxicity
- D. None of the above

Precautionary Statements

4. Hazard and precautionary statements that are not required on the front panel may appear on other panels of the label. These statements must appear together on the label under the heading "_____ " and under the appropriate subheadings.

- A. Active ingredient
- B. Hazard
- C. Precautionary Statements
- D. None of the above

Signal Word

5. Products classified as _____ based on acute oral, acute dermal, or acute inhalation hazard; or certain inert ingredients must also include the word "Poison" (in red on a contrasting background color) next to the signal word DANGER, with the skull and crossbones symbol in close proximity.

- A. Active ingredient
- B. Toxicity Category I
- C. Most serious pesticide poisoning(s)
- D. None of the above

Personal Protective Equipment

6. All pesticide handlers—applicators, mixer/loaders, flaggers, and early-entry agricultural workers—are legally required to follow all PPE instructions that appear on the _____.
- A. Product label
 - B. Restricted use chemical(s)
 - C. Highest/most toxic acute toxicity category
 - D. None of the above

Hazard = Toxicity x Exposure

7. Which of the following is a measure of its capacity or ability to cause injury or illness? The toxicity of a particular pesticide is determined by subjecting test animals to varying dosages of the active ingredient (a.i.) and each of its formulated products.
- A. Restricted use chemical(s)
 - B. Active ingredient
 - C. The toxicity of a pesticide
 - D. None of the above
8. By understanding the difference in toxicity levels of pesticides, a user can minimize the potential hazard by selecting the _____ that will control the pest.
- A. Product label
 - B. Active ingredient
 - C. Pesticide with the lowest toxicity
 - D. None of the above

Acute Toxicity and Acute Effects

9. Which of the following is determined by examining the dermal toxicity, inhalation toxicity, and oral toxicity of test animals. In addition, eye and skin irritation are also examined?
- A. Restricted use chemical(s)
 - B. Active ingredient
 - C. Acute toxicity
 - D. None of the above

Respiratory Protection Sub-Section Types of Respirators Commonly Used Respirators (Air Purifying)

10. _____ is a type of respirator worn over the nose and mouth to protect the respiratory system from certain nuisance dusts, mists, etc.
- A. An Air-Line Respirator
 - B. A Full-Face Respirator
 - C. A Disposable Dust Mask
 - D. None of the above
11. Dust masks cannot be fit tested, are generally single use, are not recognized as proper respiratory protection, and may not be worn if a _____ exists.
- A. Proper respirator
 - B. Maximum concentration
 - C. Potential for overexposure
 - D. None of the above
12. Full-face, helmet or hood type powered air purifying respirators (PAPRs) operate under positive pressure inside the face piece. A battery operated motor blower assembly forces air through a filter cartridge into the _____.
- A. Maximum concentration
 - B. Negative pressure
 - C. Wearer's breathing zone
 - D. None of the above

Respirator Filters/Cartridges

13. The cartridges used for _____ must be either equipped with an end-of-service life indicator (ESLI) or a cartridge change schedule has to be established.
- A. Air-Line Respirators
 - B. Half-Face Respirators
 - C. Air-purifying respirators
 - D. None of the above

Who Cannot Wear a Respirator?

14. Respirators cannot be worn when a person wears _____ that interferes with the seal of the face piece.

- A. Clothing
- B. Glasses or personal protective equipment
- C. A headphone set
- D. None of the above

Cleaning Respirators

15. Respirators should be cleaned and disinfected once a year. Check the respirator for damage before wearing it.

- A. True
- B. False

Topic 4 – Environmental Effects

1. Which of the following are found in soil and air, and in surface and ground water across the countries, and urban pesticide uses contribute to the problem?

- A. Nonpersistent residues
- B. Pesticide residues
- C. Non-selective pesticide residues
- D. None of the above

2. The residue levels allowed on food crops at harvest are legally set by the federal and state regulatory agencies and are called _____.

- A. Very persistent Tolerances
- B. Nonpersistent Tolerances
- C. Tolerances
- D. None of the above

3. Which of the following represent levels of pesticide residues which scientists have determined may safely remain on the food crop without injury to the consumer?

- A. Tolerance(s)
- B. Pesticide permitted tolerances
- C. Pesticide contamination tolerances
- D. None of the above

4. When pesticide tolerances are found to be exceed _____, the agricultural commodities involved may be seized and destroyed.

- A. Legal tolerance(s)
- B. Persistent tolerances
- C. Pesticide contamination tolerances
- D. None of the above

Unwanted Environmental Effects of Pesticides

5. Most of the organophosphates (e.g., parathion, Malathion) and pyrethroids are _____.

- A. Nonpersistent
- B. Much less persistent
- C. Non-selective pesticide
- D. None of the above

6. Pesticides in soils break down through _____ which depend on the structure of the soil, its moisture content, its pH, salinity and other factors.

- A. Sunshine
- B. Natural processes
- C. Chemical reactions
- D. None of the above

7. By definition, pesticides that harm non-target organism populations significantly are _____.

- A. Pesticide persistent
- B. Persistent
- C. Non-selective
- D. None of the above

8. Which of the following are particularly important when applying a pesticide to waxy or hairy leaves?

- A. Surfactants
- B. Spray droplet(s)
- C. Nonionic type
- D. None of the above

9. Which of the following can reduce evaporation of the pesticide, and some slow down the degradation of pesticides by sunlight?

- A. Sticker(s)
- B. Spray drift
- C. Surfactants
- D. None of the above

10. Another way in which 2,4-D injury can occur is by _____.

- A. Windy condition(s)
- B. Spray drift
- C. Sticker(s) drift
- D. None of the above

Vapor Drift (Volatilization)

11. Most cases of 2,4-D injury to cotton result from _____ of an ester-containing formulation of 2,4-D.

- A. Spray drift
- B. Vapor drift
- C. Nonionic spray
- D. None of the above

12. Injury from _____ can occur at rather long distances from the sprayed area.

- A. Spray droplet(s)
- B. Spray
- C. Vapor drift
- D. None of the above

13. Hot temperatures, moist soils, and temperature inversions all increase the potential for _____.

- A. Windy condition(s)
- B. Vapor drift
- C. Sticker spray
- D. None of the above

14. Which of the following is not movement of material caused by wind?

- A. Windy condition(s)
- B. Vapor drift
- C. Sticker spray
- D. None of the above

15. Which of the following can be avoided by simply refraining from the use of ester-containing formulations of 2,4-D?

- A. Spray drift
- B. Sticker spray
- C. Vapor drift
- D. None of the above

Topic 5 –Hazard Communication Section

Revised Hazard Communication Program

1. Which of the following is a detailed, written description of a hazardous chemical that must be kept in the workplace where such chemicals are used?

- A. SDS/MSDS
- B. Hazard Communication Standard (HCS)
- C. Hazard communication elements
- D. None of the above

2. It is important to know what chemicals are present and/or used, their hazards to human health and the environment, and the?

- A. Means to control them
- B. Hazards to human health
- C. GHS
- D. None of the above

3. OSHA's HazCom rule has significant new requirements that will require employers to train their employees how to read and interpret the?
- A. New SDS
 - B. Right to understand
 - C. Hazardous chemicals
 - D. None of the above

More on the Revised Hazard Communication Standard

4. Which of the following will provide a common and coherent approach to classifying chemicals and communicating hazard information on labels and safety data sheets?
- A. Safety data sheets and labels
 - B. Specific criteria
 - C. Hazard Communication Standard (HCS)
 - D. None of the above

Hazard Classification

5. Which of the following is used to indicate that only the intrinsic hazardous properties of substances and mixtures are considered?
- A. Hazards of a substance or mixture
 - B. The data used for classification
 - C. Hazard classification
 - D. None of the above
6. Subsequent review of those data to ascertain the hazards associated with the?
- A. Safety Data Sheets
 - B. Degree of hazard
 - C. Substance or mixture
 - D. None of the above

3.1 What are the GHS Physical Hazards?

7. Which of the following was developed by the ILO and UNCETDG, were largely based on the existing criteria used by the UN Model Regulation on the Transport of Dangerous Goods?
- A. Physical hazards classification
 - B. Scope of the GHS
 - C. GHS physical hazard criteria
 - D. None of the above
8. Which of the following provides specific references to approved test methods and criteria for classification?
- A. Physical hazards classification process
 - B. Liquid or a gas
 - C. GHS physical hazard criteria
 - D. None of the above

3.1.2 Flammable Gases

9. Which of the following - means a gas having a flammable range in air at 20°C and a standard pressure of 101.3 kPa?
- A. Flammable gas
 - B. Chemical heat of combustion
 - C. Ignition distance test
 - D. None of the above

3.1.3 Flammable Aerosols

10. Aerosols are any gas compressed, liquefied or dissolved under pressure within a non-refillable container made of metal, glass or plastic, with or without?
- A. Single hazard category
 - B. A liquid, paste or powder
 - C. Chemical heat of combustion
 - D. None of the above
11. The container is fitted with a release device allowing the contents to be ejected as solid or liquid particles in suspension in a gas, as a foam, paste or powder or?
- A. Substances and mixtures
 - B. In a liquid or gaseous state
 - C. Exothermic chemical reactions
 - D. None of the above

Oxidizing Gases

12. Which of the following means any gas which may, generally by providing oxygen, cause or contribute to the combustion of other material more than air does?

- A. Single hazard category
- B. Flammable gas
- C. Oxidizing gas
- D. None of the above

3.1.5 Gases under Pressure

13. Which of the following under pressure are contained in a receptacle at a pressure not less than 280 Pa at 20°C or as a refrigerated liquid?

- A. Substances and mixtures
- B. Gases
- C. Substances and mixtures of this hazard class
- D. None of the above

3.1.8 Self-Reactive Substances

14. Which of the following are thermally unstable liquids or solids liable to undergo a strongly exothermic thermal decomposition even without participation of oxygen?

- A. Readily combustible solids
- B. Basis of the flash point
- C. Self-reactive substances
- D. None of the above

3.1.13 Oxidizing Liquids

15. Which of the following while in itself not necessarily combustible, may, generally by yielding oxygen, cause or contribute to the combustion of other material?

- A. Readily combustible liquid
- B. Explosive liquid
- C. An oxidizing liquid
- D. None of the above

Topic 6 – Advanced Safety Competency Assignment Common Pesticide/Herbicides A-L Section

1. Which term represents impregnated clothing such as pre-treated shoes, socks, and pants repel and kill ticks, mosquitoes, and other insects and retain this effect after repeated laundering?

- A. Borate(s)
- B. Permethrin
- C. 2,4-Dichlorophenoxyacetic Acid
- D. None of the above

2. Which term is a generic term for compounds containing the elements boron and oxygen?

- A. Carbaryl
- B. Borate(s)
- C. Bromethalin
- D. None of the above

3. Which term is one of the most toxic carbamate pesticides? It is marketed under the trade names Furadan, by FMC Corporation and Curater, among several others. It is used to control insects in a wide variety of field crops, including potatoes, corn and soybeans.

- A. Aldicarb
- B. Carbofuran
- C. Cypermethrin
- D. None of the above

4. Which term is a chemical mainly used as a bird repellent, as an insecticide and as molluscicide? It is toxic to humans, not listed as a carcinogen, is toxic to reproductive organs, and a potent neurotoxin.

- A. Deltamethrin
- B. Methiocarb
- C. Imidacloprid
- D. None of the above

5. Which term is used outdoors on lawns, ornamental gardens, golf courses, and indoors as a spot or crack and crevice treatment? In its purest form, deltamethrin is colorless or white to light beige crystals that have no odor.

- A. Deltamethrin
- B. Glyphosate
- C. Imidacloprid
- D. None of the above

6. Floramite, which contains the active ingredient _____ is labeled for control of a wide range of mites, including two-spotted spider mite, Pacific mite, strawberry mite, European red mite, citrus red mite, clover mite, southern red mite, spruce spider mite, and bamboo spider mite.

- A. Malathion
- B. Chlordimeform
- C. Bifenazate
- D. None of the above

7. Which term and its derivatives are lipid-based hormone signals that regulate a wide range of processes in plants, ranging from growth and photosynthesis to reproductive development? In particular, these are critical for plant defense against herbivory and plant responses to poor environmental conditions and other kinds of abiotic and biotic challenges.

- A. Glyphosate
- B. Methiocarb
- C. Jasmonate(s)
- D. None of the above

8. Which term is a rodenticide which poisons the central nervous system by uncoupling mitochondrial oxidative phosphorylation, which causes a decrease in adenosine triphosphate (ATP) synthesis? Decreased ATP ultimately results in increased intracranial pressure, which damages neuronal axons. This damage to the central nervous system can cause paralysis, convulsions, and death.

- A. Carbaryl
- B. Borate(s)
- C. Bromethalin
- D. None of the above

9. Which term is a common systemic pesticide / herbicide used in the control of broadleaf weeds? It is the most widely used herbicide in the world, and the third most commonly used in North America.

- A. Borate(s)
- B. Permethrin
- C. 2,4-Dichlorophenoxyacetic Acid
- D. None of the above

10. Which term is a chemical in the carbamate family used chiefly as an insecticide? It is a white crystalline solid commonly sold under the brand name Sevin, a trademark of the Bayer Company.

- A. Dimethoate
- B. Carbaryl
- C. Borate(s)
- D. None of the above

11. Which term is one of the most toxic carbamate pesticides? It is marketed under the trade names Furadan, by FMC Corporation and Curater, among several others. It is used to control insects in a wide variety of field crops, including potatoes, corn and soybeans.

- A. Dimethoate
- B. Carbofuran
- C. Borate(s)
- D. None of the above

12. Which term kills insects by inhibiting acetylcholinesterase, an enzyme necessary for proper nervous system function?

- A. Carbaryl
- B. Carbofuran
- C. Diazinon
- D. None of the above

13. Which term is highly toxic to fish, bees and aquatic insects, according to the National Pesticides Telecommunications Network (NPTN)? It is found in many household ant and cockroach killers, including Raid and ant chalk.

- A. Aldicarb
- B. Acephate
- C. Cypermethrin
- D. None of the above

14. Which term is an insecticide belonging to the pyrethroid family? Pyrethroids are the man-made versions of pyrethrins, natural insecticides from chrysanthemum flowers.

- A. Deltamethrin
- B. Glyphosate
- C. Imidacloprid
- D. None of the above

15. Which term is a widely used organophosphate insecticide used to kill insects on contact? It was patented and introduced in the 1950s by American Cyanamid.

- A. Dimethoate
- B. Carbaryl
- C. Borate(s)
- D. None of the above

Topic 7 — Advanced Safety Competency Assignment

1. Which term is a commercial product commonly use petroleum distillates as carriers?

- A. Metal Phosphides
- B. Pyrethroid
- C. Paraquat
- D. None of the above

2. Which term usually have a milky appearance?

- A. Emulsions
- B. Solutions
- C. Suspensions
- D. None of the above

3. Which term is effective as an ovicide/insecticide for control of bollworm and tobacco budworm in cotton? Effective also for the control of resistant mites and their eggs, and many lepidopterous insect pests but not on current U.S. label

- A. Chlordimeform
- B. Paraquat
- C. Resmethrin
- D. None of the above

4. Which term is a broad-spectrum pyrethroid insecticide? It is available in dusts, emulsifiable concentrates, smokes, ULV concentrates, and wettable-powder formulations.

- A. Chlordimeform
- B. Phosmet
- C. Permethrin
- D. None of the above

5. Which term is an organophosphate insecticide first reported in 1960? It acts as a cholinesterase inhibitor.

- A. Pyrethroid
- B. Plant Penetrants
- C. Phosphamidon
- D. None of the above

6. Which term formulations are ready to use and contain a low percentage of active ingredients, plus a very fine, dry inert carrier made from talc, chalk, clay, nut hulls, or volcanic ash?

- A. Baits
- B. Solution
- C. Dusts
- D. None of the above

7. Which of the following terms is the keystone to an economical, effective and flexible program to break and control mite development?

- A. Apollo SC
- B. Pyrethroids
- C. Paraquat
- D. None of the above

8. Which term is the trade name of one of the most widely used herbicides in the world?
- A. Paraquat C. Propoxur
B. Phosmet D. None of the above
9. Which pesticide is a viologen, is quick-acting and non-selective, killing green plant tissue on contact. It is also toxic to human beings and animals, and is linked to the development of Parkinson's disease.
- A. Metal Phosphides C. Paraquat
B. Phosphamidon D. None of the above
10. Which term is a carbamate insecticide used to control aphids on vegetable, cereal and orchard crops by inhibiting acetylcholinesterase activity?
- A. Chlordimeform C. Resmethrin
B. Pirimicarb D. None of the above
11. To mimic the insecticidal activity of the natural compound _____ another class of pesticides, pyrethroid pesticides, has been developed. These are non-persistent, which is a sodium channel modulators, and are much less acutely toxic than organophosphates and carbamates. Compounds in this group are often applied against household pests.
- A. Metal Phosphides C. Paraquat
B. Pyrethrum D. None of the above
12. Which term is a pyrethroid insecticide with many uses, including control of the adult mosquito population?
- A. Chlordimeform C. Resmethrin
B. Phosmet D. None of the above
13. Which term is ready to use and require no further dilution before application? They consist of a small amount of active ingredient (often 1 percent or less per unit volume) dissolved in an organic solvent. They usually do not stain fabrics or have unpleasant odors.
- A. Baits C. Ready-to-use Low-concentrate Solutions
B. Suspensions D. None of the above
14. Which term contains a water-soluble pesticide dispersed in an oil carrier?
- A. Invert Emulsions C. Suspension
B. Solution D. None of the above
15. Which term requires a special kind of emulsifier that allows the pesticide to be mixed with a large volume of petroleum-based carrier, usually fuel oil, aiding in reducing drift?
- A. Invert Emulsions C. Suspension
B. Solution D. None of the above

Pesticide Safety Training CEU Training Assignment #5 Repeat Students Only

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

We will require students to fax or e-mail a copy of their driver's license with the registration form.

You will need to pick one of the following three assignments to complete. This selection process is based upon your last name.

Complete all topics before submitting the answers key.

15 final exam questions. (s) Means answer can be singular or plural.

Topic 1 - Pesticide Safety Introduction

Identify the proper definition.

1. An organic solvent or mineral clay
 - A. Stickers
 - B. Carrier
 - C. Minor Purpose Adjuvants
 - D. None of the above

2. The ability of a pesticide to remain present and active in its original form for a long time before breaking down.
 - A. Active ingredient
 - B. Adsorption
 - C. Persistence
 - D. None of the above

3. A pesticide that adsorbs to soil particles is less likely to move from the spray site than one that does not adsorb tightly to soil.
 - A. Adsorption
 - B. Solubility
 - C. Residue
 - D. None of the above

4. Stickers and spreaders
 - A. Active ingredient
 - B. Surfactants
 - C. Adjuvant(s)
 - D. None of the above

5. Chemicals that physically alter the surface tension of a spray droplet.
 - A. Adjuvant(s)
 - B. Surfactants
 - C. Diluent
 - D. None of the above

6. A chemical added that can be added to a liquid to reduce its surface tension and make the chemical more effective in spreading over and penetrating surfaces.
- A. Inverting Agents
 - B. Carrier
 - C. Wetting Agent
 - D. None of the above

Pesticide Medias – Primary Delivery Systems: Identify the proper definition.

7. These are also effective in areas of poor sanitation where readily available food renders traditional baits ineffective.
- A. Liquid Baits
 - B. Wettable Powders
 - C. Dry or Solid Formulations
 - D. None of the above
8. A few products, however, may be applied either as a dust or as a wettable powder; the choice is left to the applicator. The particles do not dissolve in water. They settle out quickly unless constantly agitated to keep them suspended.
- A. Soluble Powders
 - B. Fumigants
 - C. Wettable Powders
 - D. None of the above
9. Few pesticides are available in this formulation because few active ingredients are readily soluble in water.
- A. Fumigants
 - B. Wettable Powders
 - C. Soluble Powders
 - D. None of the above
10. When you drop these bags into a filled spray tank, they dissolve and release their contents to mix with the water.
- A. Water-Soluble Packets
 - B. Ultra-Low Volume (ULV)
 - C. Liquid Formulations
 - D. None of the above
11. These special purpose formulations are used mostly in outdoor applications, such as in agricultural, forestry, ornamental, and mosquito control programs.
- A. Water-Soluble Packets
 - B. Ultra-Low Volume (ULV)
 - C. Liquid Formulations
 - D. None of the above

Six Basic IPM Components: Identify the components definition.

12. The emphasis is on control, not eradication. IPM holds that wiping out an entire pest population is often impossible, and the attempt can be economically expensive, environmentally unsafe, and frequently unachievable.
- A. Biological controls
 - B. Mechanical controls
 - C. Acceptable pest levels
 - D. None of the above
13. Monitor the degree days of an environment to determine when is the optimal time for a specific insect's outbreak.
- A. Responsible Pesticide Use
 - B. Acceptable pest levels
 - C. Regular observation
 - D. None of the above

Pesticide Degradation

14. Pesticide degradation, or the breakdown of pesticides, usually is beneficial. Which of the following change most pesticide residues in the environment to nontoxic or harmless compounds?
- A. The chemical structure
 - B. Pesticide-destroying reactions
 - C. Water-insoluble pesticides
 - D. None of the above

Biological Degradation

15. Microorganisms have developed many enzymes that can break down _____. Modern scientists, though, have created pesticides with chemical structures not found in nature. These unique structures are often responsible for a pesticide's effectiveness and also explain why pesticides can persist in the environment.

- A. Natural compounds
- B. Beneficial compounds
- C. Chemical and physical properties
- D. None of the above

Topic 2 – Proper Pesticide Handling Section Assignment

15 Multiple choice questions.

Mixing and Loading Pesticides

1. One of the _____ related to pesticide-related illness, is the mixing and loading of concentrated chemicals, specifically low-volume and ultra-low volume formulations.

- A. Handling pesticide waste(s)
- B. Potentially harmful
- C. Most dangerous jobs
- D. None of the above

Mixing Pesticides Summary

2. Always read and carefully follow label directions when _____. Even if you are familiar with a particular chemical, reread the label to ensure that you have the latest safety information.

- A. Mixing pesticides
- B. Chronic exposures
- C. Splashing chemicals
- D. None of the above

Work in a Safe Area

3. The pesticide mixing and loading area should be well ventilated, well lighted, and downhill from any _____. Concrete slabs are ideal for mixing chemicals since they allow for easy cleanup.

- A. Pesticide-related problems
- B. Pesticide accidents
- C. Water sources
- D. None of the above

Rinsing Helps Protect the Environment

4. Proper rinsing of pesticide containers reduces a _____ of soil, surface, and ground water.

- A. Bunch of problems
- B. Potentially harmful concerns
- C. Potential source of contamination
- D. None of the above

Decontamination Supplies

5. Which of the following must make sure that decontamination supplies for washing off pesticides and pesticide residues are provided to handlers while they are doing handling tasks?

- A. Workers
- B. Handlers
- C. Handler employers
- D. None of the above

6. Which of the following must make sure that decontamination supplies for washing off pesticide residues are provided to workers who are working in a pesticide-treated area and are doing tasks that involve contact with anything that has been treated with the pesticide, including soil, water, or surfaces of plants?

- A. Handlers
- B. Applicators
- C. Worker employers
- D. None of the above

Ready-to-Use Low-Concentrate Solutions (RTU)

7. Low-concentrate formulations are ready to use and require no further dilution before application. They consist of a _____ dissolved in an organic solvent. They usually do not stain fabrics or have unpleasant odors.

- A. Organic solvent(s)
- B. Most toxic pesticides
- C. Small amount of active ingredient
- D. None of the above

Ultra-low Volume (ULV)

8. These concentrates may approach 100 percent active ingredient. They are designed to be used as is or to be diluted with only small quantities of a specified carrier and are used at rates of no more than 1/2 gallon per acre. These _____ are used mostly in outdoor applications, such as in agricultural, forestry, ornamental, and mosquito control programs.

- A. Special purpose formulations
- B. Most toxic pesticides
- C. Low-concentrate formulation(s)
- D. None of the above

Restricted-Entry Interval (REI)

9. The restricted-entry interval is the time immediately after a pesticide application when entry into the _____ is limited.

- A. Spills/releases
- B. Different REIs
- C. Treated area
- D. None of the above

10. Which of the following will have one REI, such as 12 hours, for all crops and uses? Other products have different REIs depending on the crop or method of application. When two (or more) pesticides are applied at the same time, and have different REIs, you must follow the longer interval.

- A. Organic solvent(s)
- B. Some pesticides
- C. Low-concentrate formulation(s)
- D. None of the above

WPS Requires Providing Decontamination Sites

11. Employers must establish a decontamination site for all workers and handlers for washing off pesticides and pesticide residues. A decontamination site must be within a quarter (1/4) mile of the?

- A. Pesticide application
- B. Spills/releases
- C. Employees' work site
- D. None of the above

Emergency and First-Aid Procedures

12. Emergency procedures—know what to do in case of an emergency such as an accidental spill or exposure. The SDS (formerly MSDS) may also provide emergency phone numbers for reporting certain?

- A. Spills/releases
- B. Different REIs
- C. Drift from nearby applications
- D. None of the above

Each WPS Safety Poster Must Convey to Workers and Handlers

13. How to help keep pesticides from getting on or into their bodies. The poster must include the following instructions: Avoid getting on your skin or into your body any pesticides that may be on plants and soil, in irrigation water, or from?

- A. Spills/releases
- B. Treated or restricted areas
- C. Drifting from nearby applications
- D. None of the above

Activated Charcoal

14. Activated charcoal is sometimes administered because it has been shown to be successful with some?

- A. Syrups of ipecac
- B. Liquids
- C. Pesticides
- D. None of the above

15. Which of the following can reduce the amount absorbed if given within 60 minutes, though there is not enough data to determine if it is effective if time from ingestion is prolonged?

- A. Syrup of ipecac
- B. Milk
- C. Activated charcoal
- D. None of the above

Topic 3 – Personal Protection Section Post Quiz

Provide Prior Notification

1. Prior to applying pesticides, inform all people in or around the application area. Notification allows people to protect themselves from _____.

- A. Active ingredient
- B. Product label
- C. Harmful chemicals
- D. None of the above

Pesticide Label Breakdown Restricted Use Designation

2. Which of the following require a pesticide license and will not be in most retail stores and is not meant for homeowner use?

- A. Restricted use chemical(s)
- B. Active ingredient
- C. Acute toxicity of a pesticide
- D. None of the above

Precautionary Statements

3. Hazard and precautionary statements that are not required on the front panel may appear on other panels of the label. These statements must appear together on the label under the heading “_____” and under the appropriate subheadings.

- A. Active ingredient
- B. Hazard
- C. Precautionary Statements
- D. None of the above

Signal Word

4. Products classified as _____ based on acute oral, acute dermal, or acute inhalation hazard; or certain inert ingredients must also include the word “Poison” (in red on a contrasting background color) next to the signal word DANGER, with the skull and crossbones symbol in close proximity.

- A. Hazard
- B. Toxicity Category I
- C. Active ingredient
- D. None of the above

Personal Protective Equipment

5. A _____ lists the minimum PPE that a person must wear while performing handling or early-entry activities. Once the correct toxicity category has been established, the product-specific handler PPE can be identified.

- A. Active ingredient
- B. Hazard
- C. Pesticide label
- D. None of the above

Hazard = Toxicity x Exposure

6. Which of the following is a measure of its capacity or ability to cause injury or illness? The toxicity of a particular pesticide is determined by subjecting test animals to varying dosages of the active ingredient (a.i.) and each of its formulated products.

- A. Restricted use chemical(s)
- B. Active ingredient
- C. The toxicity of a pesticide
- D. None of the above

Acute Toxicity and Acute Effects

7. Acute toxicity of a pesticide refers to the chemical's ability to cause injury to a person or animal from a single exposure, generally of short duration. The harmful effects that occur from a single exposure by any route of entry are termed "_____."

- A. Acute effects
- B. Acute toxicity of a pesticide
- C. Most serious pesticide poisoning(s)
- D. None of the above

Respirator Filters/Cartridges

8. The cartridges used for _____ must be either equipped with an end-of-service life indicator (ESLI) or a cartridge change schedule has to be established.

- A. Air-Line Respirators
- B. Half-Face Respirators
- C. Air-purifying respirators
- D. None of the above

9. There are _____ of filters for protection against particulates.

- A. Proper protection classes
- B. No types
- C. Nine classes
- D. None of the above

Protection Factors

10. The protection factor of a respirator is based on the ratio of two concentrations: the _____ outside the respirator to the contaminant concentration inside the respirator.

- A. Atmosphere
- B. Contaminant concentration
- C. Person's facial features
- D. None of the above

11. When a _____ outside the respirator is known, the APF can be used to estimate the concentration inside a particular type of respirator worn by the user.

- A. Low oxygen level
- B. Toxic gas
- C. Contaminant concentration
- D. None of the above

Who Cannot Wear a Respirator?

12. Respirators cannot be worn when a person wears _____ that interferes with the seal of the face piece.

- A. Jewelry
- B. Other equipment
- C. Glasses or personal protective equipment
- D. None of the above

13. Respirators cannot be worn when a person has _____ that comes between the sealing surface of the face piece and the face or interferes with valve function.

- A. Clothing
- B. Jewelry
- C. Facial hair
- D. None of the above

Staying Prepared for Respirator Use

14. Getting used to respirators takes practice. Possible problems with wearing respirators may include heat exhaustion or heat stroke.

- A. True
- B. False

Panic

15. _____ is important when working in a hot, stressful, or awkward situation.
- A. A respirator
 - B. Staying calm
 - C. Following recommendations
 - D. None of the above

Topic 4 – Environmental Effects

1. Which of the following represent levels of pesticide residues which scientists have determined may safely remain on the food crop without injury to the consumer?
- A. Tolerance(s)
 - B. Persistent tolerances
 - C. Non-selective tolerances
 - D. None of the above
2. Which of the following vary according to the pesticide and the crop?
- A. Tolerance(s)
 - B. Non-selective tolerances
 - C. Pesticide permitted tolerances
 - D. None of the above
3. Pyrethrins, and carbamate pesticides are _____.
- A. Natural processes
 - B. Persistent
 - C. Non-selective
 - D. None of the above
4. Pesticides in soils break down through _____ which depend on the structure of the soil, its moisture content, its pH, salinity and other factors.
- A. Natural processes
 - B. Photography
 - C. Chemical reactions
 - D. None of the above
5. Which of the following work best with nozzles that reduce the number of fine and mist-like drops? To be effective and safe, nozzles may need to be changed for different pesticide applications.
- A. Drift control adjuvants
 - B. Spray droplet(s)
 - C. Nonionic type
 - D. None of the above
6. Too much surfactant, however, can cause excessive runoff and reduce _____.
- A. Windy condition(s) efficacy
 - B. Spray drift efficacy
 - C. Pesticide efficacy
 - D. None of the above
7. Which of the following are compatible with most pesticides, and most EPA-registered pesticides that require a surfactant recommend a nonionic type?
- A. Spray droplet(s)
 - B. Spray drift
 - C. Nonionic surfactants
 - D. None of the above
8. Another way in which 2,4-D injury can occur is by _____.
- A. Windy condition(s)
 - B. Spray drift
 - C. Sticker(s) drift
 - D. None of the above
9. Which of the following means physical movement of spray droplets by wind?
- A. Sticker(s) drift
 - B. Vapor injury
 - C. Spray drift
 - D. None of the above
10. Spraying during windy conditions and using nozzles and pressures that result in the creation of fine spray droplets increase the risk of _____.
- A. Spray droplet(s)
 - B. Spray drift
 - C. Vapor injury
 - D. None of the above

11. Most cases of 2,4-D injury to cotton result from _____ of an ester-containing formulation of 2,4-D.
- A. Windy condition(s) C. Sticker(s) spray
 B. Vapor drift D. None of the above
12. Which of the following injury results when the herbicide volatilizes and the vapors move to a susceptible crop such as cotton?
- A. Spray droplet(s) C. Vapor drift
 B. Spray D. None of the above
13. Which of the following is not movement of material caused by wind?
- A. Windy condition(s) C. Sticker spray
 B. Vapor drift D. None of the above
14. Which of the following can be avoided by simply refraining from the use of ester-containing formulations of 2,4-D?
- A. Spray drift C. Nonionic mist
 B. Vapor drift D. None of the above
15. Injury from _____ can occur at rather long distances from the sprayed area.
- A. Spray droplet(s) C. Vapor drift
 B. Spray D. None of the above

Topic 5 –Hazard Communication Section
Revised Hazard Communication Program

1. New 2012 changes to OSHA's _____ are bringing the U.S. into alignment with the Globally Harmonized System of Classification and Labelling of Chemicals, improving safety and health protections for America's workers.
- A. Safety data sheets and labels C. Hazard Communication Standard
 B. Specific criteria D. None of the above
2. The Hazard Communication Standard in 1983 gave the workers the _____ but the new Globally Harmonized System gives workers the 'right to understand.'
- A. Identities and hazards C. Right to know
 B. Right to understandC. D. None of the above
3. The new Hazard Communication Standard still requires chemical manufacturers and importers to evaluate the chemicals they produce or import and provide _____ to employers and workers by putting labels on containers and preparing safety data sheets.
- A. Safety data sheets and labels C. Hazard information
 B. Specific criteria D. None of the above
4. Which of the following allowed chemical manufacturers and importers to convey hazard information on labels and material safety data sheets in whatever format they chose?
- A. OSHA's HazCom rule C. Hazardous chemicals
 B. Old standard D. None of the above

5. Which of the following provides a single set of harmonized criteria for classifying chemicals according to their health and physical hazards and specifies hazard communication elements for labelling and safety data sheets?

- A. Safety data sheets and labels
- B. Specific criteria
- C. Modified standard
- D. None of the above

6. The Safety Data Sheet is at the heart of federal OSHA's?

- A. Hazard communication standard (HazCom)
- B. Right to understand
- C. Hazardous chemicals
- D. None of the above

7. Which of the following is a detailed, written description of a hazardous chemical that must be kept in the workplace where such chemicals are used?

- A. SDS/MSDS
- B. Specific criteria
- C. Hazard communication elements
- D. None of the above

8. It is important to know what chemicals are present and/or used, their hazards to human health and the environment, and the?

- A. Hazards to human health
- B. Multiple safety data sheets
- C. Means to control them
- D. None of the above

3.1 What are the GHS Physical Hazards?

9. Which of the following was developed by the ILO and UNCETDG, were largely based on the existing criteria used by the UN Model Regulation on the Transport of Dangerous Goods?

- A. Physical hazards classification
- B. GHS criteria
- C. GHS physical hazard criteria
- D. None of the above

10. Which of the following provides specific references to approved test methods and criteria for classification?

- A. Physical hazards classification process
- B. Scope of the GHS includes all target audiences
- C. GHS physical hazard criteria
- D. None of the above

3.1.3 Flammable Aerosols

11. Aerosols are any gas compressed, liquefied or dissolved under pressure within a non-refillable container made of metal, glass or plastic, with or without?

- A. Single hazard category
- B. A liquid, paste or powder
- C. Chemical heat of combustion
- D. None of the above

Aerosols are considered:

12. Which of the following, if the concentration of the flammable components $\leq 1\%$ and the heat of combustion is < 20 kJ/g?

- A. Single hazard category
- B. Flammable gas
- C. Nonflammable
- D. None of the above

3.1.6 Flammable Liquids

13. Which of the following means a liquid having a flash point of not more than 93°C ?

- A. Flammable liquid
- B. Readily combustible solids
- C. Explosive, organic peroxides or as oxidizing
- D. None of the above

3.1.7 Flammable Solids

14. Which of the following are solids that are readily combustible, or may cause or contribute to fire through friction?

- A. Readily combustible solids
- B. Flammable solids
- C. Critical temperature
- D. None of the above

3.1.15 Organic Peroxides

15. The term also includes organic peroxide formulations, such substances and mixtures may: be liable to _____; burn rapidly; be sensitive to impact or friction; react dangerously with other substances.

- A. Melt
- B. Decompose
- C. Explosive decomposition
- D. None of the above

Topic 6 – Advanced Safety Competency Assignment

Common Pesticide/Herbicides A-L Section

1. Which term is a highly lethal vitamin K antagonist anticoagulant poison? In recent years, it has become one of the world's most widely used pesticides? It is typically used as a rodenticide but is also used to control larger mammalian pests such as possum.

- A. Acephate
- B. Carbofuran
- C. Brodifacoum
- D. None of the above

2. Which term is a chemical mainly used as a bird repellent, as an insecticide and as molluscicide? It is toxic to humans, not listed as a carcinogen, is toxic to reproductive organs, and a potent neurotoxin.

- A. Deltamethrin
- B. Methiocarb
- C. Imidacloprid
- D. None of the above

3. Floramite, which contains the active ingredient _____ is labeled for control of a wide range of mites, including two-spotted spider mite, Pacific mite, strawberry mite, European red mite, citrus red mite, clover mite, southern red mite, spruce spider mite, and bamboo spider mite.

- A. Malathion
- B. Fenvalerate
- C. Bifenazate
- D. None of the above

4. Which term means impregnated clothing such as pre-treated shoes, socks, and pants repel and kill ticks, mosquitoes, and other insects and retain this effect after repeated laundering?

- A. Carbaryl
- B. Permethrin
- C. Bromethalin
- D. None of the above

5. Which term is a chemical in the carbamate family used chiefly as an insecticide? It is a white crystalline solid commonly sold under the brand name Sevin, a trademark of the Bayer Company.

- A. Borate(s)
- B. Permethrin
- C. Carbaryl
- D. None of the above

6. Chronic exposure to low levels of which term have been hypothesized to impair memory, but this is disputed. According to the United States Environmental Protection Agency there is currently no reliable information on adverse health effects of chronic exposure to it.

- A. Malathion
- B. Fenvalerate
- C. Bifenazate
- D. None of the above

7. Which term is one of the most toxic carbamate pesticides? It is marketed under the trade names Furadan, by FMC Corporation and Curater, among several others. It is used to control insects in a wide variety of field crops, including potatoes, corn and soybeans.

- A. Acephate
- B. Carbofuran
- C. Brodifacoum
- D. None of the above

8. Which term and its derivatives are lipid-based hormone signals that regulate a wide range of processes in plants, ranging from growth and photosynthesis to reproductive development? In particular, these are critical for plant defense against herbivory and plant responses to poor environmental conditions and other kinds of abiotic and biotic challenges.

- A. Glyphosate
- B. Methiocarb
- C. Jasmonate(s)
- D. None of the above

9. Which term is a contact and stomach insecticide used against many sucking, biting pests? It is particularly effective against fruit flies, leaf hoppers, cereal bugs, stem borers, mosquitoes, animal parasites, mites, aphids, codling moths, and weaver birds. It has been widely used in sugar cane, rice, field corn, beets, pome and stone fruit, citrus fruits, pistachio, cotton, olives, coffee, cocoa, vegetables, and vines.

- A. Fenvalerate
- B. Chlordimeform
- C. Fenthion
- D. None of the above

10. Which term is one of the most toxic carbamate pesticides? It is marketed under the trade names Furadan, by FMC Corporation and Curater, among several others. It is used to control insects in a wide variety of field crops, including potatoes, corn and soybeans.

- A. Carbaryl
- B. Carbofuran
- C. Diazinon
- D. None of the above

11. Which term kills insects by inhibiting acetylcholinesterase, an enzyme necessary for proper nervous system function?

- A. Dimethoate
- B. Carbofuran
- C. Diazinon
- D. None of the above

12. Which term has a low persistence in soil? The half-life is 2 to 6 weeks. The symptoms associated with diazinon poisoning in humans include weakness, headaches, tightness in the chest, blurred vision, nonreactive pinpoint pupils, excessive salivation, sweating, nausea, vomiting, diarrhea, abdominal cramps, and slurred speech.

- A. Dimethoate
- B. Diazinon
- C. Borate(s)
- D. None of the above

13. Which term is highly toxic to fish, bees and aquatic insects, according to the National Pesticides Telecommunications Network (NPTN)? It is found in many household ant and cockroach killers, including Raid and ant chalk.

- A. Aldicarb
- B. Acephate
- C. Cypermethrin
- D. None of the above

14. Which term is an insecticide belonging to the pyrethroid family? Pyrethroids are the man-made versions of pyrethrins, natural insecticides from chrysanthemum flowers.

- A. Deltamethrin
- B. Methiocarb
- C. Imidacloprid
- D. None of the above

15. Which term is a widely used organophosphate insecticide used to kill insects on contact? It was patented and introduced in the 1950s by American Cyanamid.

- A. Dimethoate
- B. Carbaryl
- C. Borate(s)
- D. None of the above

Topic 7 — Advanced Safety Competency Assignment

1. Which term have been used as a means of killing rodents and are considered single-dose fast acting rodenticides (death occurs commonly within 1-3 days after single bait ingestion)? The acid in the digestive system of the rodent reacts with the phosphide to generate the toxic phosphine gas.

- A. Paraquat
- B. Metal Phosphides
- C. Propoxur
- D. None of the above

2. Which term is an inorganic chemical compound?

- A. Chlordimeform
- B. Phosmet
- C. Zinc Phosphide
- D. None of the above

3. Which term is a carbamate insecticide and was introduced in 1959? It is a non-systemic insecticide with a fast knockdown and long residual effect used against turf, forestry, and household pests and fleas.

- A. Paraquat
- B. Phosmet
- C. Propoxur
- D. None of the above

4. Which term are ready to use and require no further dilution before application? They consist of a small amount of active ingredient (often 1 percent or less per unit volume) dissolved in an organic solvent. They usually do not stain fabrics or have unpleasant odors.

- A. Baits
- B. Solution
- C. Ready-to-use Low-concentrate Solutions
- D. None of the above

5. Which term contains a water-soluble pesticide dispersed in an oil carrier?

- A. Invert Emulsions
- B. Solution
- C. Suspension
- D. None of the above

6. Which term requires a special kind of emulsifier that allows the pesticide to be mixed with a large volume of petroleum-based carrier, usually fuel oil reducing drift?

- A. Invert Emulsions
- B. Solution
- C. Suspension
- D. None of the above

7. Which term formulations contain one or more active ingredients and a solvent? Most contain a low percentage of active ingredients.

- A. Aerosols
- B. Invert Emulsions
- C. Low-concentrate Solutions
- D. None of the above

8. Which term can be divided into two types: ready-to-use and concentrates that must be mixed with water to be applied as a spray?

- A. Dry Formulations
- B. Invert Emulsions
- C. Tracking Powders
- D. None of the above

9. Which term concentrates may approach 100 percent active ingredient? They are designed to be used as is or to be diluted with only small quantities of a specified carrier and are used at rates of no more than 1/2 gallon per acre.

- A. Flowables/Liquids
- B. Ultra-low Volume
- C. Tracking Powders
- D. None of the above

10. Which term attracts the pests or is placed where the pests will find it? Pests are killed by eating the bait that contains the pesticide?

- A. Baits
- B. Invert Emulsions
- C. Low-concentrate Solutions
- D. None of the above

11. Which term results when a substance is dissolved in a liquid? The components of a true solution cannot be mechanically separated.

- A. Baits
- B. Solution
- C. Ready-to-use Low-concentrate Solutions
- D. None of the above

12. Which term is a mixture of finely divided, solid particles dispersed in a liquid? The solid particles do not dissolve in the liquid, and the mixture must be agitated to keep the particles evenly distributed.

- A. Invert Emulsions
- B. Ultra-low Volume
- C. Suspension
- D. None of the above

13. Which term occurs when one liquid is dispersed (as droplets) in another liquid? Each liquid retains its original identity. Some degree of agitation generally is required to keep the emulsion from separating.

- A. Baits
- B. Emulsions
- C. Ready-to-use Low-concentrate Solutions
- D. None of the above

14. Which term is the keystone to an economical, effective and flexible program to break and control mite development?

- A. Pyrethroids
- B. Apollo SC
- C. Paraquat
- D. None of the above

15. Which term is the trade name of one of the most widely used herbicides in the world?

- A. Chlordimeform
- B. Paraquat
- C. Resmethrin
- D. None of the above