

These questions are meant primarily to give an idea of the exam questions, and may not accurately reflect current reference materials or emphasis of exams



CATEGORY A – PESTICIDE APPLICATIONS AND SAFETY

PRACTICE QUESTIONS

1. When wall voids and dead spaces must be treated from small openings, the most effective formulation to use would be:
 - A. Liquid residual spray.
 - B. Granules.
 - C. Wettable powder.
 - D. Dust.

2. The amount of drift increases as:
 - A. Nozzle size increases.
 - B. Droplet or particle size increases.
 - C. Wind speed increases.
 - D. Sprayer pressure decreases.

3. You are calibrating a sprayer. You find that your sprayer is putting out 2 gallons per minute of spray, and that it takes 20 minutes for you to spray an acre of land. How much spray per acre is your sprayer putting out?
 - A. 0.1 gallons per acre.
 - B. 10 gallons per acre.
 - C. 40 gallons per acre.
 - D. 160 gallons per acre.

4. You know that a tank full of pesticide will cover 5 acres of land. You wish to apply a pesticide at a rate of 4 pints per acre. How many pints of pesticide should be placed in the tank?
 - A. 0.80 pints.
 - B. 1.25 pints.
 - C. 10 pints.
 - D. 20 pints.

5. To clean a clogged nozzle, use:
 - A. Water or detergent and a soft brush.
 - B. A steel bristle brush.
 - C. A needle or pin.
 - D. Your mouth to blow it clear.

These questions are meant primarily to give an idea of the exam questions, and may not accurately reflect current reference materials or emphasis of exams



6. Dusters should be cleaned periodically and emptied of their contents when stored because most insecticidal dusts:
 - A. Attract moisture, causing caking problems.
 - B. Breakdown quickly in storage.
 - C. Are highly corrosive, damaging the equipment.
 - D. Rapidly dry out, losing their effectiveness.

7. You wish to spray weeds at a dosage rate of 5 pounds of weed killer in 100 gallons of water per acre. How much weed killer will you need to spray 10 acres?
 - A. 2 pounds.
 - B. 5 pounds.
 - C. 50 pounds.
 - D. 500 pounds.

8. You can increase the application rate by decreasing the:
 - A. Pressure.
 - B. Tank capacity.
 - C. Ground speed.
 - D. Size of the nozzle orifice.

9. The adjustment of application equipment to apply a pesticide formulation at a desired application rate is called:
 - A. Dilution.
 - B. Formulation.
 - C. Preventive maintenance.
 - D. Calibration.

10. The best method of making major changes in the output rate of sprayers is to change the:
 - A. Pressure.
 - B. Ground speed.
 - C. Nozzle size.
 - D. Viscosity of the spray formulation.

11. If your sprayer's output rate is 4 gallons per minute and you treat 2000 square feet per minute, then your application rate is:
 - A. 1 gallon per 8000 square feet.
 - B. 2 gallons per 1000 square feet.
 - C. 4 gallons per 1000 square feet.
 - D. 8 gallons per 1000 square feet.

These questions are meant primarily to give an idea of the exam questions, and may not accurately reflect current reference materials or emphasis of exams

12. The directions on an emulsifiable concentrate insecticide label say “Apply spray containing 10 tablespoons per gallons of water at a rate of 1 gallon to 1000 square feet.” How much spray should you mix to apply to an area that is 50 feet long and 30 feet wide?
- A. ½ gallon.
 - B. 1 gallon.
 - C. 1.5 gallons.
 - D. 3 gallons.
13. In the example above, how much concentrate should you use if you have to make 2 gallons of finished spray? Hint: 2 tablespoons (Tbs) = 1 fluid ounce (fl oz).
- A. 10 fl oz.
 - B. 10 Tbs.
 - C. 5 fl oz.
 - D. 15 Tbs.
14. A vehicle traveling at a rate of 12 miles per hour will travel how many feet in 30 seconds?
- A. 123 feet.
 - B. 528 feet.
 - C. 729 feet.
 - D. 450 feet.
15. Biological control means:
- A. The control of a pest by another organism.
 - B. The use of insect growth regulators.
 - C. The use botanical pesticides.
 - D. The use of any pesticides that are not synthetic.
16. Which of these LD₅₀ values represent the most toxic pesticides?
- A. 585 mg/kg
 - B. 320 mg/kg
 - C. 27 mg/kg
 - D. 6200 mg/kg
17. Systemic toxicants are:
- A. Now banned by EPA.
 - B. Used for both plants and animal pests.
 - C. All inert gases of some form.
 - D. Taken up only by the nervous system.

These questions are meant primarily to give an idea of the exam questions, and may not accurately reflect current reference materials or emphasis of exams



18. Selective herbicides:
- A. Are completely safe, because they act only on the target pest species.
 - B. Are completely safe only if there has been no rain during the past 6 hours.
 - C. Should never be used along rights-of-way.
 - D. If misused, can kill desirable plants as well as targeted species.
19. Wettable powders are:
- A. Materials to which an emulsifying agent has been added.
 - B. Are powders that can withstand washing off after application.
 - C. Are finely ground powders.
 - D. Are powders which do not need agitation after wash has been added.
20. Granules:
- A. Always consist of pure pesticides.
 - B. Are especially useful in aquatic habitats.
 - C. Consist of spores of microbial products such as Bti.
 - D. Can never be delivered by air.
21. The following pesticide is an organophosphate:
- A. DDT.
 - B. Diazinon.
 - C. Methoxychlor.
 - D. Permethrin.
22. Only the following can be considered a microbial pesticide:
- A. Mosquitofish.
 - B. *Bacillus thuringiensis*.
 - C. *Plasmodium falciparum*.
 - D. The *Varroa* mite of honey bees.
23. The following type of pesticide would be most likely to be used as a mosquito adulticide:
- A. Stomach poison.
 - B. Contact poison.
 - C. Systemic toxicant.
 - D. Petroleum oil.
24. The following type of pesticide would be least likely to be used to control mosquito larvae:
- A. Stomach poison.
 - B. Microbial pesticide.
 - C. Aerosol insecticide.
 - D. Petroleum oil.

These questions are meant primarily to give an idea of the exam questions, and may not accurately reflect current reference materials or emphasis of exams



25. There is a legal requirement to read the label on a pesticide container:
- A. Only when a new pesticide is introduced to the market.
 - B. Only when new equipment is used for a particular pesticide.
 - C. Only when a new employee is trained.
 - D. Each time a pesticide is applied.
26. You should read the label on a pesticide container:
- A. Only if it is a restricted pesticide.
 - B. Before you dispose of the pesticide or its empty container.
 - C. Only if you are a certified applicator.
 - D. Less than 24 hours after the application of any pesticide.
27. On a pesticide label, the word "Warning" applies to:
- A. Category I chemicals.
 - B. Category II chemicals.
 - C. Category III chemicals.
 - D. Only chemicals which must be kept out of the reach of children.
28. On a pesticide label, the word "Caution" applies to:
- A. Category I chemicals.
 - B. Category II chemicals.
 - C. Category III chemicals.
 - D. Only chemicals which must be kept out of the reach of children.
29. A skull and crossbones on a pesticide label means the material:
- A. Is a category I chemical.
 - B. Is a category III chemical.
 - C. Cannot be used for mosquito control operations.
 - D. Cannot be used in or around aquatic habitats.
30. The term "MSDS" means:
- A. Mean survival dose standard.
 - B. Mean safety dose standard.
 - C. Material safety dose standard.
 - D. Material safety data sheet.
31. Pesticide residue tolerances apply to:
- A. Raw agricultural commodities.
 - B. Canned, frozen, and otherwise processed foods
 - C. Fruit and nut crops only.
 - D. Agricultural commodities that are hand-picked (as opposed to machine picked).

These questions are meant primarily to give an idea of the exam questions, and may not accurately reflect current reference materials or emphasis of exams



32. An EPA registration number on a label means:
- A. The material is endorsed by the U.S. Environmental Protection Agency.
 - B. Registration of the material is pending with the U.S. Environmental Protection Agency.
 - C. The material may be used in environmentally sensitive areas.
 - D. The material is registered with the U.S. Environmental Protection Agency.
33. Brand names of pesticides:
- A. Are usually the most prominent part of a pesticide label.
 - B. Cannot be used on labels – the common name is required.
 - C. Are not authorized for use in interstate commerce.
 - D. Can be used on a label only if accompanied by a disclaimer.
34. Which of the following type of information is not usually found on a pesticide label?
- A. The EPA registration number.
 - B. The cost of the active ingredient on a per acre basis.
 - C. The name and address of the manufacturer.
 - D. The statement: "Keep out of the reach of children".
35. Most poisons work by:
- A. Dissolving vital tissues.
 - B. Changing the rate of various body functions.
 - C. Clogging major arteries or veins.
 - D. Lowering the pH of the blood.
36. NOEL means:
- A. No outward effects left.
 - B. No observable extensive lesions.
 - C. No ordinary effects line.
 - D. No observable effect level.
37. LD₅₀ is the:
- A. Legal dose which by law cannot exceed 50%.
 - B. Period of time it takes for 50% of a given chemical to leave the body.
 - C. Dose that will kill 50% of a group of test subjects.
 - D. Symbol for the 50 isotope of lead (which happens to coincide with 50% mortality).
38. Carcinogenesis refers to the:
- A. Production of tumors.
 - B. Production of birth defects.
 - C. Suppression of the immune system.
 - D. All of the above.

These questions are meant primarily to give an idea of the exam questions, and may not accurately reflect current reference materials or emphasis of exams



39. Mutagenesis refers to the:
- A. Production of tumors.
 - B. Suppression of the immune system.
 - C. Change in genetic structure.
 - D. None of the above.
40. Acute toxicity is:
- A. A toxic effect of short duration.
 - B. A toxic effect which is fatal.
 - C. A toxic effect which lasts a long time.
 - D. An effect which occurs immediately.
41. Teratogenesis is:
- A. The production of nodules.
 - B. The production of tumors.
 - C. The production of fibrous growth.
 - D. The production of birth defects.
42. Primary irritant dermatitis (PID):
- A. Can occur from exposure to a number of pesticides.
 - B. Is caused only by solvents, not pesticides themselves.
 - C. Is caused only by secondary infections after pesticide exposure.
 - D. Results only in allergic individuals.
43. Subchronic toxicity refers to:
- A. Effects which occur after chronic effects have appeared.
 - B. Effects which cannot be detected.
 - C. Effects which occur later than acute effects but before chronic effects.
 - D. Effects which occur beneath the surface of the skin.
44. TD_{50} is:
- A. The dose which will kill 50% of a group of test animals.
 - B. The dose which will kill 50% of humans exposed.
 - C. The dose which will have some adverse effects on 50% of a group of test subjects.
 - D. The time it takes to kill 50% of a group of test subjects.
45. If you believe you have been exposed to a pesticide on your skin, you should:
- A. Contact a physician before you do anything else.
 - B. Notify your supervisor before you do anything else.
 - C. Report a hazardous spill before you do anything else.
 - D. Wash before you do anything else.

These questions are meant primarily to give an idea of the exam questions, and may not accurately reflect current reference materials or emphasis of exams



46. The most common route of poisoning by pesticides in humans is:
- A. Through the dermal route.
 - B. Through the respiratory route.
 - C. Through the oral route.
 - D. Through the eyes.
47. Organophosphates poison by:
- A. Interfering with oxygen transport (by combining with heme molecules).
 - B. Massive tissue destruction.
 - C. Interfering with proper nerve functioning.
 - D. Causing hemorrhaging.
48. A common symptom of severe organophosphate poisoning is:
- A. A rapidly spreading rash.
 - B. Profuse bleeding from the gums.
 - C. Muscle twitching.
 - D. Cuts and scratches which take a long time to heal.
49. Pyrethroid insecticides:
- A. Are all extremely toxic.
 - B. Are all extremely non-toxic.
 - C. Vary in toxicity.
 - D. Are natural products, and thus probably safe.
50. The most common factor associate with pesticide poisoning via the oral route is:
- A. The use of outdated, illegal products.
 - B. The use of pesticides designed to control pests occurring on human bodies, such as lice.
 - C. Seepage of pesticides into drinking water supply systems.
 - D. The transfers of pesticides into unmarked containers from their original containers.
51. Never transport pesticides in:
- A. Passenger compartments of vehicles.
 - B. Unmarked vehicles of any kind.
 - C. Vehicles that are not approved for public highway use.
 - D. Pickup trucks that do not have covered cargo beds.

These questions are meant primarily to give an idea of the exam questions, and may not accurately reflect current reference materials or emphasis of exams



52. Instructions for the proper equipment and protective clothing needed for mixing pesticides are found:
- A. On the label of the pesticide container.
 - B. In EPA directives, which must be posted in all storage areas.
 - C. In the Federal Register, under FIFRA.
 - D. In the Code of Federal Regulations, or CFR.
53. All pesticide spills must be reported to:
- A. The U.S. Coast and Geodetic Survey.
 - B. The board of county commissioners.
 - C. The FBI.
 - D. The agricultural commissioner or local health department.
54. Mist blowers are characterized by:
- A. Low air velocity and high spray volume.
 - B. High air velocity and high spray volume.
 - C. High air velocity and low spray volume.
 - D. Low air velocity and low spray volume.
55. High pressure, or “hydraulic” sprayers are characterized by:
- A. Low pressure and high spray volume.
 - B. High pressure and high spray volume.
 - C. High pressure and low spray volume.
 - D. Low pressure and low spray volume.
56. A tolerance is:
- A. The amount of pesticide cattle can eat without having any poisonous effect.
 - B. The amount of pesticide people can eat without getting sick.
 - C. The legally permissible residue of pesticide 24 hours after spraying.
 - D. The legally permissible limit of pesticide on a crop at harvest.
57. The primary disadvantage of brass nozzles is:
- A. Their relatively high cost.
 - B. Their tendency to form chemical complexes with certain pesticides.
 - C. Their tendency to wear out in a relatively short period of time.
 - D. All of the above.
58. Characteristics of plastic spray nozzles include:
- A. Well suited for high pressures.
 - B. Highly resistant to solvents.
 - C. Low costs.
 - D. Resistance to wear.

These questions are meant primarily to give an idea of the exam questions, and may not accurately reflect current reference materials or emphasis of exams



59. Which statement is true?
- A. Pesticide labels will always list all possible mixtures permitted.
 - B. Pesticide labels do not cover mixing of different pesticides.
 - C. It is all right to mix compatible pesticides for certain purposes.
 - D. Mixing of different pesticides should be avoided if at all possible.
60. You are calibrating a sprayer. You find that your sprayer is putting out 4 gallons per minute of spray, and that it takes 15 minutes for you to spray an acre of land. How much spray per acre is your sprayer putting out?
- A. 0.27 gallons per acre.
 - B. 3.75 gallons per acre.
 - C. 60 gallons per acre.
 - D. 240 gallons per acre.
61. You know that a tank full of pesticides will cover 6 acres of land. You wish to apply a pesticide at a rate of 2 pints per acre. How many pints of pesticide should be placed in the tank?
- A. 3 pints.
 - B. 8 pints.
 - C. 12 pints.
 - D. 24 pints.
62. One advantage of granular pesticides is:
- A. Low cost.
 - B. They usually do not have to be mixed.
 - C. They can be applied with almost any piece of equipment.
 - D. All of the above.
63. Pesticide tanks, when filled with pesticides must be labeled with:
- A. The EPA registration number of the pesticide.
 - B. The person or agency owning the tank.
 - C. Any precautionary statements.
 - D. All of the above.
64. The type of pesticide formulation most likely to cause drift is:
- A. Dust.
 - B. ULV spray.
 - C. Large volume spray.
 - D. Granules.

These questions are meant primarily to give an idea of the exam questions, and may not accurately reflect current reference materials or emphasis of exams



65. Pesticide resistance occurs because:
- A. Excessive spraying causes irritation to resistant populations.
 - B. Pesticides are applied at many times their recommended doses.
 - C. Excessive exposure to a pesticide selects against susceptible individuals, leaving resistant individuals.
 - D. Of the gradual shift from adult control to larval control in insects in general.
66. Cross-resistance is:
- A. When resistance can not be reversed.
 - B. Resistance which occurs in both larvae and adults of a given pest species.
 - C. Resistance which occurs in one pest species after spraying for a different species.
 - D. Resistance in a pest population to chemically related pesticides.
67. Soil pollution from pesticide applications can result in:
- A. Contamination of water supplies.
 - B. Phytotoxicity.
 - C. Illegal residues in crops.
 - D. All of the above.
68. Atmospheric pollution from pesticide application is most likely to occur with:
- A. Improperly maintained equipment.
 - B. Spraying at night.
 - C. Illegal use of water soluble packets.
 - D. Granules.
69. Bio-concentration means:
- A. The accumulation of pesticides in plant or animal tissues.
 - B. The use of microbial insecticides.
 - C. The use of pesticides derived from living organisms.
 - D. The crowding of animals to make pesticide treatment more efficient.
70. Adverse environmental effects can best be avoided by:
- A. Not using synthetic organic pesticides.
 - B. Reading and following the pesticide label.
 - C. Using only pesticides with short residual effects.
 - D. All of the above.

These questions are meant primarily to give an idea of the exam questions, and may not accurately reflect current reference materials or emphasis of exams



71. Synergism is:
- A. Two organisms of different species living together.
 - B. Two organisms of the same species living together.
 - C. Spontaneous combustion caused by mixing two pesticides.
 - D. When two chemicals used in combination are more effective than either one used alone.
72. Potentiation is:
- A. A desirable effect of mixing two or more pesticides.
 - B. Is the same as synergism.
 - C. Is an undesirable effect of mixing two or more pesticides.
 - D. Is the passing of an electric current through a pesticide solution.