

GENERAL STANDARD EXAM REVIEW QUESTIONS

The following questions and corresponding answers are examples. The questions and corresponding answers may or may not appear on the exam you will be given.

1. The goal of IPM isn't to eliminate the entire pest population but....
**To avoid adverse effects on humans, wildlife and the environment
(The questions is something like the above, not sure exact wording)**

2. Which of the following words is that number of pests per plant or the amount of damage to a plant at which point control measures should begin?
Economic Threshold

3. What can be said about insects?
They have three pairs of jointed legs.

4. Which of the following is an incomplete life cycle?
Egg, nymph and adult.

5. The disease that is generally the result of unfavorable growing conditions, such as temperature or moisture extremes, soil compaction, pesticide or fertilizer excess, etc..?
Noninfectious Disease

6. The first step in planning a successful weed control program is?
Identify the weed (scouting)

7. Broadleaf weeds differ from grasses how?
**They have netted veins that are usually less elongated than that of grass leaves.
(This question may be the opposite, how do grasses differ from broadleaf weeds –
leaves are more elongated than wide, but I think it is the question above)**

8. This weed germinates in the spring, develops a root system and a low-growing cluster of leaves called a rosette?
Biennial

9. The part of the pesticide that kills is the?
Active ingredient

10. Wetable powders when mixed with water....
Require agitation

11. What do Surfactants do?
Decrease the surface tension of water, allowing the water carrier to spread over the surface.

12. Can you mix two pesticides together if the label doesn't specify they can be mixed?
Yes, your responsibility to make sure they retain their properties.
13. How can you tell two pesticides are not compatible?
The mixture may curdle, gel or become sludge like.
14. How long is certification valid in Illinois, before an applicator/operator must retest? P 44
Each exam is valid for a period of up to 3 years as long as annual renewal forms are submitted.
15. The pre-harvest interval is the?
Amount of time that a crop can be harvested after it has been sprayed.
16. Which of the following is on every label?
Keep out of Reach of Children.
17. Who can purchase Restricted Use Pesticides?
Certified Applicators or persons under their direct supervision.
18. What part of the label should you look under to find the minimum PPE you should wear?
Precautionary Statement.
19. How often should you read the pesticide label?
Every time you purchase the product- can be used up to the phase out date
20. The Office of Safety and Health Administration protects the nation's workers through dissemination of information....
"Worker Right-to-Know"
21. Which of the following dermal exposures is the most serious?
When a pesticide mixed with oil crosses the skin barrier and into the bloodstream, the results can be fatal.
22. If you spill highly concentrated chemicals on your cloths how should you clean them?
Don't, dispose of them properly.
23. When filling, rinsing, draining, and cleaning your equipment preferably the area should have?
A wash pad, wash rack, or concrete apron with a well designed sump to catch contaminated water.
24. What is the best way to get rid of excess chemical?
Dilute excess and reapply to area, but do not exceed label rates for area.
25. What is a major concern of drift?
Off target damage to vegetation and people.

26. Which of the following is important to consider when purchasing and applying a pesticide?
- The label is a legal document
 - Before you buy and apply a pesticide read the label
 - A General Use pesticide is not given a classification on the label
 - All of the above**
27. What is a major complaint to the Dept. of Agriculture about spraying?
- Drift from farms, etc...**
28. If you were going to spray an area and there are bee colonies with-in two miles what should you do?
- Contact the bee keepers 48 hrs. in advance so the colonies can be moved.**
29. When is the best time to spray if bees are in the area?
- Dawn and dusk.**
30. Must be used with special caution near bee hives, since bees may carry them back to the hive and poison the entire colony?
- Microencapsulated herbicide**
31. How would you determine if the pesticide you are using is prone to volatilization?
- Check the label, often indicates.**
32. Who do you have to contact if you have a chemical spill?
- Illinois Emergency Management Agency (IEMA), they in turn notify the appropriate agency for response, available 24hrs.**
(There may be a similar question and the answer could be to contact the emergency number on the label also available 24hrs.)
33. Which of the following is an example of a surface-water advisory?
- Allow a 66-foot buffer area between the application area and surface water sources, like a stream.**
34. Pesticide breakdown is much slower in groundwater, why?
- Low oxygen and light conditions.**
35. Which of the following influences a pesticides leaching ability?
- Soil texture and organic matter.**
36. A highly soluble pesticide is....?
- Poorly adsorbed and more likely to leach.**
37. What type of nozzle sprays in a cone pattern with droplets throughout?
- Solid-cone.**

38. When raising the boom sprayer you....?
Reduce or eliminate the overlap and increase drift.
39. What are some factors that you should think about before spraying?
Wind, temperature, droplet size...
40. When using a tree injection system you should?
Use low pressure and allow the tree to uptake chemical.
41. For treatment to be effective against perennial weeds?
Must use a translocated herbicide to control vegetative reproductive structure
42. What should you do if you spill chemical on your clothes?
Remove clothes, wash area thoroughly with soapy water, etc.
43. The PPE that you wear when applying pesticides should be laundered?
Wash as soon as possible, do not let clothes sit around.
44. What type of nozzle would you use for a band application?
Even flat fan or flat fan nozzle? (This was a question on the test, but couldn't find a concrete answer in book.)
45. What pump would you use if you wanted low flow rates and psi of up to 1000?
Piston.
46. When laundering clothes that were worn while spraying...?
Launder daily (within eight hours), keep separate from other clothing and inform person washing clothes of pesticide use.
47. How do you properly clean your nozzles?
Move to an area where it is safe and use a nozzle brush to clean nozzles.
48. When tanking mixing concentrates or highly toxic sprays...?
Wear a face shield or tight fitting goggles with antifog lenses and indirect venting.
49. Which substance produces gas, vapors, fumes and requires special licensing to handle?
Fumigants
50. Who enforces the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA)?
The U.S. Environmental Protection Agency (USEPA)
51. Who is responsible for enforcing the laws that regulate the use of pesticides for structural pest control?
Illinois Department of Public Health.

52. An individual who applies pesticides for any purpose on property other than that owned, rented or leased by themselves or their employer is a ...?

Commercial For Hire Pesticide Applicator.

53. To purchase a "restricted" use pesticide?

Must have a current valid pesticide license or certification # must be recorded on the retail invoice.

54. Lawn Care Products Application and Notice Act require?

Placement of markers immediately after application to lawn is made.

55. Applicators of "restricted" use pesticides must keep records for two years of what?

Product used, amount applied, size of area treated, crop, commodity and location, date and name of applicator.

56. What are the types of control methods?

Cultural, mechanical, biological, chemical (see page 2)

57. What is the breakeven point at which the cost of pest control equals the revenue loss caused by a pest?

Economic injury level (see p. 2)

58. What is incomplete development in insects or simple metamorphosis?

Egg, nymph, adult (see p. 6)

59. What are the 4 life cycles?

Egg, larva, pupa and adult.

60. How many legs do mites have?

4 pairs, eight legs (see p. 8)

61. What animals are not protected by law?

Starlings, house sparrows and feral pigeons (p. 8)

62. What are these symptoms: soil compaction, pesticide or fertilizer excess, temperature and moist extremes?

Noninfectious disease (see p. 9)

63. What is a yellowish-green coloration in normally green tissues such as leaves?

Chlorosis (see p.10)

64. What is abnormal swelling in a portion of a branch, leaf, root or bud?

Gall (see p. 10)

65. What is intermingling patches of green and yellow on a leaf?

Mosaic (see p. 10)

66. What does a biennial weed do?
Seed the second summer and die in the winter (see p. 12)
67. What type of herbicide is best for perennial weeds?
Systemic (translocated) herbicides (see p. 13)
68. What does A.I. Stand for ?
Active ingredient (see p. 15)
69. What order do you put these in a tank to mix them properly Soluble powders (SP), Wettable powders (WP) and Flowable (F)?
Fill tank 1/4 to 1/2 full with carrier.
Begin agitation.
Add utility agents if needed (buffers)
Add Dry pesticides: Wettable Powder (WP)
Add Wet pesticides: Flowable (F)
Add Solution forming pesticides: Soluble (SP)
Add Spray modifiers
Finish filling tank with carrier
(ie. from hardest to dissolve to easiest)
70. What happens with Wettable Powders (WP)?
They wear out pumps and nozzles (see p. 16)
71. What are necessary for the development of an infectious plant disease?
Susceptible host, Plant Pathogen, Favorable Environment and Time
72. What type of weed germinates in the spring, develops a root system and low growing cluster of leaves called a rosette?
A Biennial weed
73. Which of the following is not a type of pesticide?
a) wettable powder
b) microencapsulated
c) surfactant
d) soluble powder
74. Pesticide failure can be caused by which of the following?
a) pest resistance
b) inappropriate rate of pesticide used
c) environmental factors unfavorable for pesticide activity
d) all of the above
75. A biennial weed is?
a) Grows and sets seed every other year, staying dormant underground on alternate years
b) Flowers and set seeds twice per year

- c) Grows vegetatively for two years and flowers and set seed on the third year
d) **Grows vegetatively for one year and flowers and set seeds during the second year**

76. What type of treatment is most effective against perennial weeds?

A Systemic (translocated) herbicide to control vegetative reproductive parts

77. What does LD 50 stand for?

Dose that kills half of the test animals (stands for lethal dose (LD) for 50%)

78. How do you prevent back-siphoning of pesticide back into the water supply?

Keeping an air gap or using anti-siphoning devices on garden hoses

79. How should you transport herbicide?

Checks to make sure all containers are not leaking. Do not transport with: Food animal feed or animal supplies. Tie down and secure containers

80. How should you store herbicide?

**Store downwind and downhill from houses, play areas and ponds
Store away from human and livestock areas to avoid contamination in case of fire
Signs posted with a locked door**

81. What type of exposure occurs if chemical blows onto an operator's chest?

Dermal exposure

82. If you spill **highly concentrated toxic** chemicals on your clothing how should you clean them?

Do not clean them... dispose of them immediately and change into clean clothes

83. What is the most serious dermal exposure?

When a pesticide mixed with oil crosses the skin barrier and into the bloodstream, the results can be fatal.

84. What are the factors affecting pesticides making its way into the groundwater?

**Pesticide properties, (adsorption and solubility), Soil properties (soil texture and organic matter), Site conditions (depth of groundwater, slope & climate), Management practices (mishandling, not following directions)
Example- Leaching occurs more on sandy soil or runoff on sloped areas**

85. When should you not spray to prevent drift?

When winds are over 10 mph, wind is blowing towards sensitive areas, winds are shifting and during periods of calm/inversion.

86. Which of these conditions is most likely to result in runoff?

- a) Sloping areas
- b) Areas with little ground cover
- c) Intense rainfall

d) All of the above

87. How do you determine if the pesticide you are using is prone to volatilization?

Check the label, it often indicates.

88. What are two ways for pesticides to move downwind to non-target areas?

a) By vapor drift and particle drift

b) By runoff or soil erosion

c) By microbial degradation and photodegradation

d) By leaching through the soil profile into underground rivers

89. What is the major concern of drift?

Off target damage to vegetation and people

90. What is the major complaint the Department of Agriculture receives about spraying?

Spray drift from farms

91. Who do you have to contact if you have a chemical spill?

Illinois Emergency Management Agency (IEMA) (available 24 hours). They will notify the appropriate agency OR Contact the emergency number on the label (available 24 hours)

92. What does FIFRA stand for and what agency is the lead administrative agency?

The Federal Insecticide, Fungicide and Rodenticide Act administered by the U.S. Environmental Protection Agency (USEPA) that regulates pesticide use and registration

93. What federal agency regulated the registration of pesticides and the proper certification of pesticide applicators in the US?

U.S. Environmental Protection Agency (USEPA)

94. What act regulates the registration, storage, handling and distribution of pesticides in the state of Illinois?

Illinois Pesticide Act

95. What law is administered by the Occupational Safety and Health Administration (OSHA) that requires that employees be informed of the pesticides and other hazardous chemicals in the workplace?

Worker-Right-to-Know Law

96. What agency administers the Structural Pest Control Act which regulates wood treatment and other pests inside houses or other structures in Illinois?

Illinois Department of Public Health

97. What agency serves as the state lead agency for administration of the Illinois Pesticide Act?

Illinois Department of Agriculture

98. How many years must records of restricted pesticide applications be maintained?
2 years
99. Which of the following is important to consider when purchasing and applying a pesticide?
a) The label is a legal document
b) Before you buy and apply a pesticide read the label
c) A General Use pesticide is not given a classification on the label
d) All of the above
100. When is the greatest potential for spray drift?
When wind velocity is greater than 10 miles an hour or when the wind is blowing toward sensitive plants or critical areas.
101. When should you not apply low volume sprays (those having smaller droplet size)?
During periods of high temperature or low humidity. (since droplets evaporate easier)

PRACTICE MATH QUESTIONS

There are 2 math questions on the (operator & applicator) test like Example 7 & 8 on page 78. For help on how to do these questions see page 64.

7. How much of a 20G pesticide is needed to provide 1 pound of A.I. ?
5 pounds
8. How much of a 8EC pesticide is needed to provide 1 pound of A.I.?
0.125 gallons or 1 pint

There is also a math question like 16 or 18 on page 78 (operator & applicator) test. There are no conversions that need to be made. For help on how to do these questions see pages 72-74.

16. What GPA is applied if your nozzles supply 1.4 GPM, are 60-inches apart, and you travel 15 MPH?
9.2 GPA
18. What GPM should your nozzles provide if you want to apply 30 GPA traveling 8 MPH with nozzles 20-inches apart?
0.81 GPM

PRACTICE HERBICIDE LABEL QUESTIONS USING SAFARI 20SG LABEL

1. What group or class is Safari 20 SG Insecticide? p1
2. What company makes Safari 20 SG Insecticide? p1
3. Are there any animals to which Safari 20 SG is particularly toxic to? p1
4. What is the REI of Safari 20 SG? p2
5. How many days does the purchaser have to make a claim for affected crops? p3
6. In what order should tank mixtures be added to Safari Insecticide? p4
7. Who should you call with questions about calibration? p5
8. Can you use this product on house plants inside private residences? p7
9. What is the product rate when spraying vegetable transplants over 1000 sq. feet? p12
10. What is the A.I. of Safari Insecticide? p1
11. What is the hazardous category of Safari? Hint: This is listed below the item on every single herbicide label? p1
12. What PPE is required for early entry into treated areas? p2
13. True or False? Safari 20 SG is a non-systemic product. p3
14. When can children and pets return to the treated areas? p5
15. What is the intended use of Safari insecticide? p1
16. Where can Safari be appropriately applied? p1
17. True or false? You can use this product to control Cicadas on ornamental plants? p7
18. True or false? You can make no more than 2 sprays of a Group 4a insecticides in a 2 month period? p7
19. Can you use this product on Evergreens? p7
20. How many square feet will 100 gals. of spray mix treat?

ANSWERS

1. What group or class is Safari 20 SG Insecticide? **4A p1**
2. What company makes Safari 20 SG Insecticide? **Valent p1**
3. Are there any animals to which Safari 20 SG is particularly toxic to? **Shrimp and Bees p1 Environmental Hazards**
4. What is the REI of Safari 20 SG? **12 hours pg2 Agricultural Use Req.**
5. How many days does the purchaser have to make a claim for affected crops? **21 p3 under limited liability**
6. In what order should tank mixtures be added to Safari Insecticide?
products packaged in water-soluble packaging, wettable powders, wettable granules (dry flowables), liquid flowables, liquids, emulsifiable concentrates, and surfactant/adjuvants? See top left of Pg4 general info
- 7) Who should you call with questions about calibration? **State Extension Specialists, equipment managers, or other experts. Pg.5 Application through irrigation systems**
- 8) Can you use this product on house plants inside private residences? **No p7 ornamental plants**
- 9) What is the product rate when spraying fruiting vegetable transplants over 1000 sq. feet? **.16-.32 oz per 1000 sq feet. Pg 12 under Product Rate**
- 10) What is the A.I. of Safari Insecticide? **Dinotefuran pg1**
- 11) What is the hazardous category of Safari? **Caution pg1**
- 12) What PPE is required for early entry into treated areas? **Coveralls, Chemical-resistant gloves, shoes plus socks pg2 under Agrigultural Use Requirments**
- 13) True or False? Safari 20 SG is a non-systemic product. **False...pg. 3 under General Information**
- 14) When can children and pets return to the treated areas? **When the spray has dried p5**
- 15) What is the intended use of Safari insecticide? **For Foliar and Systemic Insect Control in Ornamental plants and Vegetable Transplants. p1**
- 16) Where can Safari be appropriately applied? **Greenhouse, Nursery, Interior Plantscape, and Outdoor landscapes. P1**
- 17) True or false? You can use this product to control Cicadas on ornamental plants? **False p 7 under Pest its not listed**
- 18) True or false? You can make no more than 2 sprays of a Group 4a insecticides in a 2 month period? **True p7 see box at bottom of table**
- 19) Can you use this product on Evergreens? **Yes p 7 under Crop**
- 20) How many square feet will 100 gals. of spray mix treat? **20,000 p 7 under Remarks**