Figure 5-196, Sample Knowledge Test

1. Should a pilot in command (PIC) of an agricultural aircraft assist in mixing and loading the aircraft when dispensing a highly toxic chemical?

2. When dispensing a highly toxic chemical, what instruction would you give your flagger, if one is being used?

3. What are some of the symptoms of chronic toxic effect, which is the cumulative buildup of chemical in the body?

4. How would you dispose of containers that held a toxic poison?

5. Where is the nearest poison control center?

6. If you have mild symptoms of organophosphate poisoning, can you administer the recommended antidote yourself and continue work until an appointment with a doctor can be arranged?

7. What emergency action would you take if a known contamination exists?

8. Indicate your swath runs and procedure turns over the following field, when dispensing a herbicide that could damage plants in the congested area.

   {Insert aviation safety inspector (ASI) developed field sketch here.}

9. Would you apply a chemical such as a highly toxic insecticide to this field? If so, how and when?

10. What wind direction would be required for applying a herbicide on the crop in the following field sketch?

    {Insert ASI developed field sketch here.}

11. How long should records required by Title 14 of the Code of Federal Regulations (14 CFR) part 137, § 137.71 be kept?

    a. 6 months
    b. 12 months
    c. until the end of the season
    d. indefinitely

12. While airborne, before starting your first swath run, what steps would you take?

13. In applying insecticides for insect control adjacent to a lake, stream, or fish-stocked earth tank, what precautions must be taken?

14. Does your agricultural aircraft operator’s certificate allow you to fly under 500 feet over the top or closer than 500 feet horizontal to a farm while going to or from your base of operation and the field you are to treat?

15. What are the steps to be taken before you can dispense chemicals over a city, town, settlement, or other congested area?

16. Does your aircraft have to be inspected before you can engage in applying insecticide for insect control over a congested area?

17. In your procedure left turn; you misjudge your turn and roll out 300 feet to the right side of your intended course. How would you correct this error?

18. Your agricultural aircraft is required by part 137 to be equipped with a (circle one):
19. In order to dispense chemicals over a congested area, you are required by part 137 to have your aircraft equipped with which of the following:

a. stall warning horn  
b. tank quantity gauge  
c. emergency dump valve or chemical jettison device  
d. boom pressure gauge

20. Insert question about the performance characteristics of the aircraft to be flown—such as weight and balance.

21. What certificate or certificates have to be carried on the aircraft engaged in agricultural aircraft operations?

a. registration  
b. facsimile of the agricultural aircraft operator's certificate  
c. both of the above

22. You are flying a restricted category agricultural aircraft with a belly unit and two seats. Can you use this aircraft for other purposes than agricultural operations?

23. Are you required to wear a crash helmet during operations?

24. Describe in detail, the dangers involved with a hot, heavy, downwind turn.

25. As your bank increases, what happens to your stall speed?
ANSWER KEY

1. There is no absolutely correct answer to this question. Ideally, the pilot should not be the person who loads the chemical since the danger of contamination is possible. The person should respond in that manner.

2. Walk upwind at all times to avoid the drifting chemicals.

3. The specific symptoms will vary somewhat with the type of pesticide used. The pilot should also respond that the symptoms can be mistaken for other diseases before chronic toxic effect is suspected and that the effects are cumulative. Generally, the symptoms are nausea, vomiting, blurred vision, excessive sweating, among others.

4. The answer to this question would depend on the chemical in the containers but the important procedure is to read the manufacturer’s label. Consult state or local regulations for additional guidance regarding the disposal of empty containers.

5. The answer would have to reflect the local area.

6. No.

7. The answer would depend upon the chemical, the location of the contamination, and any state or local requirements. Again it is important to refer to the manufacturer’s label for guidance. Generally, the pilot should wash with soap and water. For small areas, use alcohol.

8. Spray runs and procedure turns should be depicted so that drift and/or aircraft do not overrun the congested area.

9. A less toxic chemical could be used if a substitute is available. If not, spray only when the wind is blowing away from the sensitive area.

10. From the south to the north.

11. b.

12. Survey the area.

13. A definite wind blowing away from streams, lakes, etc. Consult the label to determine if setback zones are recommended.

14. No.

15. Obtain prior written approval from the governing body of the jurisdiction, give public notice of the operation, and obtain an Federal Aviation Administration (FAA)-approved plan.

16. Only the required annual and a 100-hour inspections (unless the annual was completed less than 100 hours prior to the congested area operation).

17. Pull up and reenter the swath run.

18. b.

19. c.

20.

21. b.

22. No.

23. No, it is not required by 14 CFR, but it may be a requirement in some states or when listed as an operating limitation in certain Airplane or Rotorcraft Flight Manuals (AFM/RFM). However, the use of a helmet is recommended by the FAA.

24. As you start your procedure turn downwind.

25. Increases.
I observed ___________________________ pilot # ___________________________, approved in ag applications for Aero Applicators, Inc. in part 137.19 is satisfactory in flying skills, knowledge of agriculture crop knowledge and safety prior to, during and after flying operations.

Chief Operation Supervisor Part 137 certificate #NLPG872G
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