

## Background on IPM

### 1.1 WHAT IS IPM?

- 1) The initial “I” in IPM stands for:
  - a) Insect
  - b) Integrated
  - c) Insecticide
- 2) Which statement is NOT a theme of an IPM program?
  - a) manage pests before they become a problem.
  - b) choose methods and materials that pose low risk to people and the environment while providing long-term, effective control
  - c) all pesticide applications are eliminated without exception
- 3) IPM differs most from traditional pest control service in that:
  - a) it combines two or more methods of control
  - b) it uses vacuums and traps
  - c) it does not depend on automatic application of pesticides
- 4) IPM is primarily about \_\_\_\_\_ of pests rather than waiting until the problem needs attention.
  - a) prevention
  - b) elimination
  - c) identification
- 5) Which of the following tactics is NOT a preferred way to prevent pests in an IPM program?
  - a) weekly perimeter treatment
  - b) exclusion
  - c) upgrading sanitation
- 6) Which one of these is a major component of an IPM program?
  - a) pesticides are applied on a regular schedule
  - b) materials used pose low risk to people
  - c) pest-proofing is done as a follow-up after controls have been implemented
- 7) Which one of these is a chemical control method used for cockroaches?
  - a) vacuuming
  - b) pest-proofing

- c) bait application
  - d) trapping
- 8) Which statement is TRUE?
- a) IPM eliminates the use of all pesticides
  - b) IPM uses only pesticide baits
  - c) IPM is a lower risk alternative than traditional pest control methods
- 9) Which one of these statements accurately describes an IPM program?
- a) IPM is simpler than traditional pest control
  - b) IPM requires no special training
  - c) IPM is proactive in preventing pest problems
- 10) In a school IPM program, the technician will spend most of the time:
- a) monitoring and inspecting for pests
  - b) placing baits
  - c) choosing pesticides
  - d) measuring pesticide application amounts
- 11) In a school IPM program, the \_\_\_\_\_ is involved in the decision-making process of pest management. This is also the person who decides, based on monitoring and other techniques when to implement controls
- a) principal
  - b) IPM technician
  - c) head of maintenance
- 12) In the event that pesticide usage is necessary, which one of the following pesticide applications is the best choice for controlling insects in a school IPM program if reduced exposure is required?
- a) fan spray
  - b) fogging
  - c) void treatment
  - d) baseboard treatment
- 13) In an IPM program, the risk of pesticide exposure is often higher than that of a traditional pest management program.
- a) TRUE
  - b) FALSE
- 14) IPM requires training and different supplies.
- a) TRUE

- b) FALSE
- 15) Which of the following statements best illustrates the differences between IPM in schools and traditional pest management.
- a) IPM philosophy is to react to pest problems, traditional pest management philosophy is to prevent pest problems.
  - b) IPM emphasizes baits, traditional pest management depends on sprays.
  - c) In IPM priority is to look at all approaches, while traditional pest management typically gives a higher priority to pesticide application.
- 16) Which statement about IPM in schools is TRUE?
- a) IPM technicians follow the same control procedures at every service visit
  - b) pesticides are only used to prevent pests
  - c) to be effective, IPM requires institutional coordination and staff cooperation

## 1.2 WHY IPM IN SCHOOLS?

- 17) Which one of these statements is TRUE?
- a) Children have a higher tolerance for exposure to pesticides
  - b) People today are more willing to accept health risks from contaminants in food, water, etc.
  - c) Young children are considered to be at greater risk as a result of exposure to pesticides than adults
- 18) Besides schools, which one of these accounts would be the most likely candidate for an IPM program because of risk and exposure to possible chemical application?
- a) hospital
  - b) mini-storage facility
  - c) lumber yard
- 19) Which one of these is NOT true about IPM in schools?
- a) IPM identifies sanitation problems in schools
  - b) IPM means pesticides are applied on a regular schedule regardless of evidence of infestation
  - c) IPM means people are exposed to less pesticide
  - d) IPM means improved control of pests
- 20) Why are younger children more likely than older children to be exposed to traditional insecticide sprays in their school?
- a) they have more-developed immune systems

- b) their classrooms are sprayed more often while they are present
  - c) they are more likely to transfer residues from treated surfaces to their mouths
- 21) Which might be most concerning to a medical professionals related to pest management in schools?
- a) the use of pesticides where children play and study
  - b) the presence of ants in classrooms
  - c) the high cost of pest management
- 22) Why is the pest management industry changing from traditional pest management to IPM in their school accounts?
- a) an IPM program means less time spent at the site
  - b) an increasing number of school systems recommend or mandate IPM
  - c) IPM is an easier concept to sell
  - d) all of the above
- 23) What effect does switching to IPM typically have on how well pests are controlled in a school:
- a) doesn't make any difference
  - b) control goes down slightly
  - c) significantly improved
- 24) Besides reducing pesticide exposure and improving control, what positive effects can IPM programs have on school operations?
- a) help prevent heat loss
  - b) improve security and sanitation
  - c) reduce food contamination
  - d) all of the above

### 1.3 BARRIERS TO IPM IN SCHOOLS

- 25) One of the advantages to a school IPM program, as opposed to a traditional pest management program, is that an IPM program can be run successfully with almost no input from school staff.
- a) TRUE
  - b) FALSE
- 26) School administrators are involved in the IPM program to:
- a) put out sticky traps

- b) ensure that problems contributing to pests are corrected
  - c) decide when and where pesticides will be used
- 27) One of the main concepts of IPM is that:
- a) only organic pesticides may be used
  - b) only nonchemical controls are allowed
  - c) certain pests may be acceptable at low levels
- 28) An IPM program generally requires \_\_\_\_\_ paperwork than a traditional pest management program.
- a) more
  - b) less
  - c) about the same
- 29) IPM programs require a wider range of equipment than traditional pest control programs.
- a) TRUE
  - b) FALSE
- 30) Which of the following statements is TRUE about IPM in schools?
- a) only organic pesticides can be used
  - b) pesticides are the most effective method of control
  - c) school administrators must insist on staff cooperation
- 31) A common barrier to IPM success in schools is that:
- a) some staff members will insist that technicians “fog” whenever a pest problem arises
  - b) reduced use of pesticides in IPM means less effective control
  - c) too much time is spent on paperwork
- 32) In which areas do pest management professionals typically need additional training in order to become proficient at IPM?
- a) inspection and monitoring techniques
  - b) communications
  - c) low exposure pesticide application methods
  - d) all of the above
- 33) Which one of the following is NOT a common problem for school IPM programs?
- a) school staff is unwilling to upgrade sanitation
  - b) the maintenance department will not repair damaged walls
  - c) nonchemical tactics prove ineffective

- d) the principal refuses to insist on staff cooperation

#### 1.4 ROLES AND RESPONSIBILITIES IN SCHOOL IPM

- 34) In a school IPM program, it is the job of the \_\_\_\_\_ to keep written records about pest problems, actions taken, and notes.
- a) custodian
  - b) IPM technician
  - c) teacher
  - d) principal
- 35) In a school IPM program, it is the job of the \_\_\_\_\_ to provide the financial and personnel commitments necessary for IPM to succeed.
- a) custodian
  - b) IPM technician
  - c) teacher
  - d) school administrators
- 36) Which one of these is NOT the sole responsibility of the pest management company in a school IPM program?
- a) proposing the program
  - b) inspecting and monitoring
  - c) communicating with school staff
  - d) repairing structural deficiencies
- 37) In a school IPM program, it is the job of the \_\_\_\_\_ to make sure that all school staff cooperate with the program.
- a) custodian
  - b) teacher
  - c) IPM technician
  - d) principal
- 38) Managing pests through IPM makes the job of the school maintenance staff easier than under a traditional pest management program.
- a) TRUE
  - b) FALSE
- 39) Students are the only part of the school community that doesn't play an active role in a school IPM program.

- a) TRUE
  - b) FALSE
- 40) The staff person that has primary responsibility for sanitation and trash management in most areas of a school is the:
- a) custodian
  - b) head of maintenance
  - c) teacher
  - d) cafeteria manager
- 41) Which one of these individuals has the most important role in educating students about IPM?
- a) parent
  - b) teacher
  - c) principal
- 42) The primary job of a school's IPM coordinator is to provide the financial backing for the IPM program.
- a) TRUE
  - b) FALSE
- 43) Which of the following is a typical role for school custodians in an IPM program?
- a) coordinating IPM-related information with faculty
  - b) notification of pesticide application
  - c) responding to sanitation reports from the IPM technician
  - d) all of the above
- 44) Which of the following is a typical responsibility for teachers in an IPM program?
- a) encouraging good sanitation practices
  - b) reporting pest sightings
  - c) explaining IPM to students
  - d) all of the above
- 45) Which of the following is a normal role for some parents in a school IPM program?
- a) coordinating IPM-related information with faculty
  - b) participating in advisory committees
  - c) reporting pest problems
  - d) all of the above
- 46) Which of the following is a typical role for school maintenance personnel in an IPM program?

- a) fixing leaks
  - b) pest-proofing openings that allow pest entry or movement
  - c) reporting pest problems
  - d) all of the above
- 47) Which of the following is a typical role for an IPM technician in an IPM program?
- a) communicating with school staff
  - b) fixing leaks
  - c) cleaning up spilled food
  - d) all of the above
- 48) Who typically addresses conflicts and complaints related to pesticide use in an IPM program?
- a) IPM technician
  - b) IPM coordinator
  - c) head custodian
  - d) any of the above
- 49) Who typically oversees the public notification procedures related to pesticide application in an IPM program?
- a) IPM technician
  - b) IPM coordinator
  - c) head custodian
  - d) any of the above
- 50) Who typically reports pest sightings or problems in the IPM logbook?
- a) IPM technician
  - b) teacher
  - c) head custodian
  - d) any of the above
- 51) Who has primary responsibility for reducing the hazards of pests and pesticide exposure in a school IPM program?
- a) IPM technician
  - b) IPM coordinator
  - c) head custodian
  - d) any of the above



## Inspections and Monitoring

### 2.1 VISUAL INSPECTIONS OF SCHOOLS

- 52) Which one of these is NOT part of regular monitoring in an IPM program?
- a) identifying pests
  - b) identifying factors contributing to pests
  - c) reporting sanitation problems
  - d) placing bait stations
- 53) An ant bait that will control carpenter ants will always control pharaoh ants and other pest ants.
- a) TRUE
  - b) FALSE
- 54) Why is it important to identify some pests to the species level?
- a) to impress your customer
  - b) controls may be different for closely related pests
  - c) identifying to species is easier than identifying to family
- 55) If you're not sure of the correct identification of a pest, you should:
- a) bring it back to the office and seek an expert opinion
  - b) identify it to the best of your ability before implementing controls
  - c) use a management method that works against any type of pest
- 56) The three basic components of an IPM monitoring program at a school are: a) information from school personnel, b). visual inspections of all areas, and c). \_\_\_\_\_.
- a) pesticide application
  - b) use of monitoring traps
  - c) annual reports
- 57) A thorough and effective inspection can reduce the amount of pesticide used in a school.
- a) TRUE
  - b) FALSE
- 58) At each school visit, you should first check in with the \_\_\_\_\_ to find out about pest sightings or complaints.
- a) head custodian

- b) head of maintenance
  - c) IPM coordinator
  - d) cafeteria manager
- 59) At the beginning of every inspection, you must:
- a) check outdoor sites
  - b) check hall lockers
  - c) check the IPM logbook
- 60) Which one of these signs could indicate an infestation by German cockroaches in a school?
- a) grease marks
  - b) frass
  - c) exit holes
  - d) droppings (and fecal smears)
- 61) The presence of shed insect skins in a school cafeteria is always proof of an active infestation.
- a) TRUE
  - b) FALSE
- 62) You should check inside ceiling light fixtures because some insects are attracted to light.
- a) TRUE
  - b) FALSE
- 63) Which one of these locations is NOT a likely place to find rodent droppings in a school kitchen?
- a) inside cabinets
  - b) at the wall/floor junction
  - c) under appliances
  - d) in the center of the floor in an area with lots of human activity
- 64) Which one of these pests would you be most likely to find in an area where there has been a roof leak?
- a) Yellow jacket
  - b) carpenter ant
  - c) blow fly
  - d) cricket

- 65) Aphids, spider mites, and mealybugs are most likely to be introduced into a school on:
- a) backpacks
  - b) pet rabbits
  - c) potted plants
- 66) Pests on the outside of a school building can be a contributing factor to pest problems inside the school.
- a) TRUE
  - b) FALSE
- 67) How does ivy growing up the outside wall of a school affect pest management?
- a) it attracts and harbors pests
  - b) it blocks sunlight
  - c) it requires trimming
- 68) Standing water around the foundation of a school is likely to result in a breeding site for which one of these pests?
- a) ground beetles
  - b) mosquitoes
  - c) carpenter ant
- 69) Bright exterior lights help to keep insects away from the outside of a school building.
- a) TRUE
  - b) FALSE
- 70) EPA has ruled that school IPM programs are for management of pests inside school buildings only.
- a) TRUE
  - b) FALSE
- 71) Which one of these is NOT important information if you are managing pests on outside plants?
- a) amount of defoliation on the plant
  - b) natural enemies of the plant pest
  - c) current and predicted weather
  - d) trash pickup schedule
- 72) In which one of these school areas should you spend the most time during your inspection?
- a) gymnasium

- b) hallways
  - c) cafeteria
- 73) In a school IPM program that uses the ABC approach to monitoring, the “A” designates sites that are:
- a) least vulnerable to pests
  - b) moderately vulnerable to pests
  - c) most vulnerable to pests
- 74) A site that is on the “C” list, meaning it is least vulnerable to pests, should be inspected:
- a) at every service visit
  - b) periodically
  - c) never
- 75) You should install monitors in all “B” sites in a school (those that are moderately vulnerable to infestation).
- a) TRUE
  - b) FALSE
- 76) Which one of these sites would NOT be expected to be on the “A” list (most vulnerable to pests)?
- a) food vending machines
  - b) nurse’s station
  - c) principal’s office
  - d) home economics classroom
- 77) Which one of these sites would likely be on the “B” list (moderately vulnerable to pests) in a school?
- a) school kitchen
  - b) shop room
  - c) snack bar
  - d) animal room
- 78) An attic space in a school would be on the “C” list (least vulnerable to pests) when it comes to a monitoring schedule.
- a) TRUE
  - b) FALSE

## 2.2 USING MONITORING TOOLS

- 79) Both IPM programs and standard pest management programs extensively use monitoring tools such as sticky traps.
- a) TRUE
  - b) FALSE
- 80) One advantage that monitoring tools have over a visual inspection is:
- a) they show you pest damage
  - b) they capture pests, making identification easier
  - c) they identify factors contributing to the pest problem
- 81) Monitoring tools are a helpful indicator to evaluate if control measures are working.
- a) TRUE
  - b) FALSE
- 82) Which one of these is NOT a monitoring tool in an IPM program?
- a) cockroach bait stations
  - b) sticky traps
  - c) pheromone traps
  - d) insect light traps
- 83) An insect pheromone trap:
- a) uses chemical attractant to lure insects
  - b) uses ultraviolet light to attract insects
  - c) uses a food bait to lure insects
- 84) Sticky traps are used as monitors for many different pests besides cockroaches.
- a) TRUE
  - b) FALSE
- 85) If your sticky traps don't capture any pests, you can assume the area is pest-free.
- a) TRUE
  - b) FALSE
- 86) When you capture insects on a sticky trap, it means that:
- a) the area is now pest-free
  - b) there are insects present
  - c) you should use pesticides

- 87) Which one of these is NOT something that you can learn from the capture of insects on sticky traps?
- a) the identification of the insect pest
  - b) where the infestation is centered
  - c) whether there has been insect damage
- 88) If only adult cockroaches are captured in sticky traps, it gives you a clue that you are dealing with:
- a) a new infestation that has recently moved into the area
  - b) a population of cockroaches that has been in the area for some time
- 89) If cockroaches are all captured on just one side of a sticky trap, it indicates that they were able to walk across the trap to that side before becoming stuck.
- a) TRUE
  - b) FALSE
- 90) Sticky traps are not very effective in controlling a pest infestation.
- a) TRUE
  - b) FALSE
- 91) In which **ONE** of these situations, could sticky trap monitors be useful as a control method for a pest infestation?
- a) in a sensitive site where pesticides are not permitted
  - b) around the outside perimeter of a school
  - c) to control flies in a classroom
- 92) Which one of these is NOT a good location for a sticky trap monitor?
- a) in pest travel routes
  - b) in sites where there is available food
  - c) near pest entry points into the school
  - d) on top of outside light fixtures
- 93) One of the reasons not to place sticky traps in the open is that pests avoid open spaces.
- a) TRUE
  - b) FALSE
- 94) In food storage areas, initially place insect sticky trips on or under shelves, and in corners, approximately \_\_\_\_\_ feet apart.
- a) 3

- b) 10
  - c) 20
- 95) A good place to put cockroach sticky traps is:
- a) vertically on walls
  - b) horizontally against the edges of a wall or near corners
  - c) in the center of kitchen cabinet shelves
- 96) Monitoring sticky traps should be checked every three months for evidence of pests.
- a) TRUE
  - b) FALSE
- 97) Monitoring sticky traps that have not captured any pests should still be replaced:
- a) at every service visit
  - b) once a month
  - c) according to the manufacturer's recommendation
- 98) The number of sticky traps monitors required to monitor a pest infestation in an elementary school will depend on the size of school, condition of school, and pest pressure on the school.
- a. TRUE
  - b. FALSE
- 99) Inside school buildings, pheromone traps are used most often to monitor for:
- a) pests of stored food products
  - b) Japanese beetles
  - c) house flies
  - d) crickets
- 100) Pheromone traps that use a sex attractant lure trap only female insects.
- a) TRUE
  - b) FALSE
- 101) Pheromone traps that use an aggregation pheromone will trap:
- a) only male insects
  - b) only female insects
  - c) both sexes
- 102) A pheromone trap for Indianmeal moths will also attract other stored food pests such as sawtoothed grain beetles.
- a) TRUE

- b) FALSE
- 103) The best pheromone trap style to capture the sawtoothed grain beetle is:
- a) pitfall trap
  - b) hanging trap
- 104) Which one of these is NOT good practice in the placement of insect pheromone traps?
- a) place traps in front of vents
  - b) place traps in hard-to-clean areas
  - c) place traps for crawling insects near the ground
  - d) place traps in a grid pattern
- 105) If insects might be entering the school from outside, you should place pheromone traps:
- a) on the inside near doors and windows
  - b) on the outside near doors and windows
  - c) Outside around the school building but far away from doors and windows
- 106) Once insects have been caught in a pheromone trap, you should subsequently install other traps in the grid pattern to:
- a) tighten the grid around the trap with the catch
  - b) loosen the grid around the trap with the catch
  - c) remove nearby traps, leaving only the one that is active
- 107) When you place pheromone monitoring traps in a grid pattern, it's most important to record the \_\_\_\_\_ of each trap in the map or grid.
- a) price
  - b) model and size
  - c) location
- 108) In a food storage room that is suspected to have an Indian meal moth infestation, you should check pheromone monitoring traps:
- a) at least once per week
  - b) every two weeks
  - c) once a month
- 109) An insect light trap (ILT) performs all of these functions except:
- a) it kills flying insects
  - b) it attracts only male insects
  - c) it serves as a monitoring tool



- d) it may indicate a breakdown in procedures, like a door being left open
- 110) If an insect light trap is capturing mosquitoes, it probably means that they are breeding somewhere inside the school.
  - a) TRUE
  - b) FALSE
- 111) If you capture dermestid beetles in an insect light trap in the winter, what should you do next to pinpoint the source of the problem?
  - a) install another light trap
  - b) install pheromone traps
  - c) do a crack & crevice insecticide treatment around the trap
- 112) If an insect light trap inside a school cafeteria contains large numbers of winged ants, there must be a nest nearby.
  - a) TRUE
  - b) FALSE
- 113) Insect light traps are useful for management of flying insects around the outside of a school.
  - a) TRUE
  - b) FALSE
- 114) Which one statement is NOT true about rodent monitoring blocks?
  - a) they are attractive to mice
  - b) rodents gnaw on the blocks
  - c) they are usually placed in bait stations
  - d) they kill rodents after a single feeding
- 115) How do rodent monitoring blocks help to identify the species of rodent that is present?
  - a) through gnaw marks and droppings
  - b) by carcasses found in or near the bait station
  - c) only certain rodents will feed on the blocks
- 116) One way to monitor for the presence or activity of termites around the exterior of a school is to use:
  - a) insect light traps
  - b) wood or cellulose monitors
  - c) sticky traps
- 117) Ant monitors contain food bait and can be used either indoors or outside.

- a) TRUE
- b) FALSE

## 2.3 ACTION THRESHOLDS

- 118) What is an “action threshold”?
- a) the point at which a school agrees to institute an IPM program
  - b) the point at which a technician takes action to reduce a pest’s numbers
  - c) the point above which no pesticides may be applied
- 119) What happens when a pest level is below an action threshold?
- a) no direct control action is taken
  - b) the technician institutes direct control action
  - c) sticky traps are removed
- 120) A reasonable action threshold for crickets in a school hallway would be what number?
- a) 0
  - b) 3
  - c) 10
- 121) An action threshold could be established:
- a) as a number (ex: 3 yellow jackets at a garbage can)
  - b) by a description (ex: whenever staff members complain)
  - c) by either a) or b)
  - d) by none of the above
- 122) Pests are present, but they have not reached the action threshold. What action(s) may be taken/recommended before pest numbers reach the action threshold?
- a) Recommend the school correct sanitation, clutter, and other problems that will make it easier for the pest to establish.
  - b) Automatic application of pesticides to ensure the pest population is wiped out.
  - c) Install monitoring devices, and schedule a follow-up service
  - d) Both a) and c)
- 123) An action threshold of 1 means:
- a) action is taken whether or not pests are present
  - b) action is taken if 1 or more pests are seen
  - c) no action is taken

- 124) Action thresholds may vary by:
- a) pest
  - b) season
  - c) site
  - d) all of the above
- 125) If the action threshold for carpenter bees at the building perimeter is set at 1 bee per 5 linear feet, you would begin to take control action only when the number of bees along a 40 foot section of siding reached:
- a) 5 carpenter bees
  - b) 8 carpenter bees
  - c) 20 carpenter bees
- 126) The action threshold for ticks by a school athletic field would be set \_\_\_\_\_ if Lyme disease was common in the area.
- a) higher
  - b) lower
  - c) the same
- 127) The action threshold for poisonous black widow spiders would be \_\_\_\_\_ than for garden spiders.
- a) higher
  - b) lower
  - c) the same
- 128) Which of the following is an example of aesthetic injury used to set an action threshold?
- a) bird droppings on a window
  - b) damage to structural wood
  - c) poisonous spider bites
  - d) all of the above
- 129) The average person begins to feel that some control action is necessary when a pest has damaged how much of an ornamental plant?
- a) 5%
  - b) 10%
  - c) 30%
- 130) Most people \_\_\_\_\_ on what level of ants is acceptable.
- a) agree

- b) disagree
  - c) refuse to discuss
- 131) IPM technicians can sometimes change a person's pest tolerance by providing information on pests, beneficial organisms, and the risks and benefits of control.
- a) TRUE
  - b) FALSE
- 132) Which of the following would be an example of an action threshold mandated by legal concerns?
- a) German cockroaches in the cafeteria
  - b) Acrobat ants in the schoolyard
  - c) weevils feeding on ornamental plants at the school entrance
- 133) There can be different action threshold levels depending on the action to be taken.
- a) TRUE
  - b) FALSE

## **Communications**

### **3.1 Recordkeeping Requirements**

- 134) What do good IPM records have to do with housekeeping and building repair?
- a) very little
  - b) track sanitation and structural problems contributing to pests
  - c) documentation of needed improvements
  - d) both b & c
- 135) Good IPM records of pest activity at a school over a number of years will permit the technician to do what?
- a) anticipate seasonal pest problems
  - b) apply pesticides
  - c) avoid pesticides based solely on last year's records
- 136) Information recorded in IPM records includes which of the following?
- a) pesticide applications
  - b) pesticide-sensitive areas
  - c) structural deficiencies

- d) all of the above
- 137) Although helpful, it is not necessary to record non-pesticide measures in IPM records.
  - a) TRUE
  - b) FALSE
- 138) It is important to list specific recommendations for recorded problems as school staff may not be able to formulate effective solutions on their own.
  - a) TRUE
  - b) FALSE

### 3.2 Pest-Sighting Logbook

- 139) Who records information on pest sightings in the pest-sighting log (IPM logbook)?
  - a) school staff
  - b) IPM technician
  - c) IPM coordinator
  - d) all of the above
- 140) How can a staff member be sure that a pest problem that they reported has been addressed?
  - a) by checking the logbook
  - b) if the pest has not been seen for 2 weeks
  - c) by calling the technician
- 141) A pest-sighting log becomes ineffective?
  - a) in winter
  - b) when custodians keep reporting nighttime pest problems
  - c) when it is not used regularly
  - d) all of the above
- 142) The best way for school staff to report pest problems is by speaking directly with the IPM technician.
  - a) TRUE
  - b) FALSE
- 143) When told by a staff member that he or she has seen a pest, what question should an IPM technician ask first?

- a) “Did you record your pest sighting in the log?”
  - b) “Have you done anything to control/manage the pest?”
  - c) “Please report the problem to the IPM coordinator.”
- 144) Which of the sites listed below is the best location for a pest-sighting log in a school?
- a) in an office that can be locked after school hours
  - b) in the maintenance department
  - c) in the front office
  - d) in the head custodian’s office
- 145) Why is it important for the logbook to be available for night staff?
- a) some pests are active at night
  - b) it avoids bad feelings from custodial staff
  - c) the logbook should only be available during school hours
- 146) Schools with multiple buildings should have a pest-sighting log for each building.
- a) TRUE
  - b) FALSE
- 147) Why do many pest-sighting logs include information on IPM in general and the tactics and goals of the school’s IPM program in particular? (Choose the one best answer.)
- a) to provide interested staff with information about the IPM program
  - b) to guide the IPM technician
  - c) to meet legal requirements for applying pesticides in a school
- 148) Which type of information is generally NOT in a pest-sighting log or IPM logbook?
- a) sales brochures about your company
  - b) floor plan of the school
  - c) contacts and technical personnel
- 149) Logbooks may include a reports section with IPM service reports, inspection checklists, corrective action notices, quarterly and annual reports.
- a) TRUE
  - b) FALSE

### 3.3 Reports

- 150) What is included in an IPM service report?
- a) what was done by the technician on that service date
  - b) what pesticides were applied
  - c) what was inspected
  - d) all of the above
- 151) What is a purpose of an “Intent to Apply Pesticides” form?
- a) to trigger any parental notification requirements
  - b) to notify technician’s supervisor of application
  - c) to describe the pesticide product that was applied
  - d) all of the above
- 152) To ensure that all important areas are inspected, an “IPM Inspection Report” is often \_\_\_\_\_.
- a) in the form of a checklist
  - b) filled out by a supervisor
  - c) reviewed by school personnel
  - d) all of the above
- 153) A “Corrective Action Notice” (sometimes called a “Sanitation Report”) is typically:
- a) filled out on the spot by the technician
  - b) given to the custodial foreman or cafeteria manager
  - c) saved in a “tickle file” to see if the problem is corrected
  - d) all of the above
- 154) If a custodian fixes a problem, he or she should first:
- a) note the action taken and the date in the logbook
  - b) send a follow-up notice to the technician
  - c) report to the principal
  - d) all of the above
- 155) Although in some instances, a “Quarterly IPM Report” (also called “Status Report” or “Quality Assurance Report”) is prepared by the IPM technician, more often it is prepared by:
- a) principal
  - b) school IPM coordinator
  - c) company supervisor
- 156) Which one of these is NOT a purpose of the “Annual IPM Report”?

- a) to summarize all IPM service for the past year
  - b) to report problems solved and problems still existing
  - c) to plan changes for the following year
  - d) to provide advanced notice of pesticide application
- 157) "Pesticide Usage Summaries" may be required in order to:
- a) comply with School IPM Policy
  - b) comply with regulatory agency requirements
  - c) respond to public requests for information
  - d) all of above

### 3.4 Education

- 158) Many school staff members feel that pest management is totally the responsibility of the pest management contractor, and that they have no role to play. How do you convince them otherwise?
- a) you cannot
  - b) through education
  - c) by refusing to provide service until they cooperate
  - d) none of the above
- 159) IPM programs require that school staff and students be educated about pests, the role of food and shelter in pest management, and \_\_\_\_\_.
- a) bait application
  - b) their role in reporting and minimizing pests
  - c) how to place and interpret monitors
  - d) all of the above
- 160) While you cannot depend on school staff knowing much about pest biology, at least rest in the fact they always understand the connection between pests and sanitation, pests and clutter, and pest entry and cracks and holes in walls.
- a) TRUE
  - b) FALSE
- 161) Which staff members need to be educated about the IPM program and how it works?
- a) custodians
  - b) food service workers
  - c) maintenance and grounds



- d) all of the above
- 162) Staff should be educated through which means?
  - a) one-on-one contact
  - b) bulletins and reports
  - c) group meetings
  - d) all of the above
- 163) IPM is a scientific and ecologically-based approach to pest management, so:
  - a) teachers should consider incorporating IPM into their classes
  - b) you should simplify any discussions of IPM
  - a) IPM is best left to pest management professionals

### 3.5 Notification and Posting

- 164) Who has primary responsibility for notifying parents that a pesticide is going to be applied?
  - a) the school
  - b) the pest management company
  - c) the technician
  - d) none of the above
- 165) What is the technician's primary responsibility in the notification process?
  - a) the technician has no responsibility for notification
  - b) the technician must contact parents with children on the pesticide sensitivity register
  - c) the technician may be required to provide advanced, written notice to the school
- 166) Insect baits, pastes, gels, antimicrobials, or other materials used in ways that present minimal risk of human exposure are often exempt from notification and posting requirements.
  - a) TRUE
  - b) FALSE
- 167) The process of putting up notices that pesticides are going to be applied or have been applied is called:
  - a) notification
  - b) posting
  - c) reporting

- 168) When schools require that notices of future pesticide treatment be posted in advance, where should the signs typically be posted?
- a) school entrance, lobby, area to be treated
  - b) principal's office, cafeteria kitchen, area to be treated
  - c) custodial office, food service office, area to be treated
- 169) Notices for outdoor treatments should be posted where?
- a) principal's office and lobby
  - b) school entrance and perimeter of treatment area
  - c) grounds office and principal's office

### 3.6 Evaluating Success or Failure

- 170) IPM programs have periodic formal reviews to evaluate success. Who normally conducts this review?
- a) technician
  - b) company supervisor
  - c) school staff
- 171) The formal review and evaluation may require a meeting of the IPM contractor, IPM coordinator, and other school representatives.
- a) TRUE
  - b) FALSE
- 172) What are the most important goals of a school IPM program evaluation?
- a) to assign blame for shortcomings and ensure cooperation
  - b) to see how the program is working and identify needed changes
  - c) to report on how much pesticide was used
- 173) During a school IPM program evaluation, the reviewer seeks to answer questions about the program, such as, "Were pest populations reduced in a timely manner?" How many questions do you think would be typical for such an evaluation?
- a) 3-5
  - b) 6-10
  - c) way more than 10
- 174) Who usually gets to read the completed school IPM evaluation report?
- a) all involved parties and anyone else interested
  - b) senior school staff only

- c) company supervisors, principal, and any designated senior staff
- 175) A completed school IPM evaluation report notes the current conditions, discusses the progress made against particular pests or conditions, identifies problems, compares the current situation with the original goals of the program, and sometimes offers recommendations for change.
  - a) TRUE
  - b) FALSE

## **Pest Prevention**

### **4.1 Housekeeping and Sanitation**

- 176) The three categories of control in an IPM program are (1) pest prevention, (2) nonchemical control, and (3) \_\_\_\_\_
  - a) monitoring
  - b) recordkeeping
  - c) pesticides
- 177) Which one of these is NOT a method used to prevent pest problems?
  - a) limiting available food
  - b) pest-proofing
  - c) eliminating garbage
  - d) trapping
- 178) Which statement is TRUE?
  - a) Pests avoid areas with lots of clutter.
  - b) Cockroaches and ants do not require a water source.
  - c) Removing available food can help prevent pests.
- 179) Which one of these is generally NOT the job of an IPM technician?
  - a) checking for clutter in storage areas
  - b) taking steps themselves to improve housekeeping
  - c) making recommendations for improvements in sanitation
- 180) School staff do not need to understand the relationship between food, standing water, clutter and pests.
  - a) TRUE
  - b) FALSE

- 181) Good sanitation to prevent pest problems is most important in which one of these school areas?
- a) kitchen
  - b) classrooms
  - c) bathrooms
- 182) When is the best time to clean food preparation surfaces?
- a) after each use
  - b) at the end of the school day
  - c) first thing in the morning
- 183) How often should school kitchens be steam cleaned, power washed, or “deep-cleaned” by other methods?
- a) once a year
  - b) 2-3 times a year
  - c) every month
- 184) When a kitchen is deep-cleaned by steam or power washing, all kitchen equipment should be moved or taken apart.
- a) TRUE
  - b) FALSE
- 185) Which one of these kitchen cleaning chores should be done daily?
- a) cleaning exhaust filters
  - b) using enzyme cleaner in floor drains
  - c) emptying insect light traps
  - d) cleaning of floors
- 186) Which one of these is NOT true about proper handling of garbage cans?
- a) they should be cleaned regularly
  - b) they should have a plastic bag liner
  - c) they should be emptied once a week
- 187) Stored, packaged foods are best stored on:
- a) wooden shelves
  - b) steel, wire shelves
  - c) bare floor
- 188) Pallets that are holding stored food products should be at least 6 inches from the wall.
- a) TRUE

- b) FALSE
- 189) Stored foods should be used according to the “first in, first out” policy because:
  - a) foods purchased earlier are cheaper
  - b) older foods are at the back of the shelf
  - c) older foods are more likely to be infested with pests
- 190) Which one of these is NOT considered to be a food handling area in a school?
  - a) teachers’ lounge
  - b) home economics classroom
  - c) janitor’s closet
  - d) vending machine room
- 191) In a school, recommendations to clean up garbage and food materials apply only to food preparation, food storage, or food service areas.
  - a) TRUE
  - b) FALSE
- 192) Fungus beetles are most likely to be found in an area in a school where there is:
  - a) a roof leak
  - b) spilled fruit juice
  - c) food garbage
- 193) Animal feed for caged animals in classrooms or science labs should be:
  - a) stored in the original box or bag
  - b) stored in tightly-sealed containers
  - c) left in cages only at night
- 194) In janitorial closets, wet mops should be:
  - a) left in a dry mop bucket
  - b) left in a mop bucket with water
  - c) hung upside-down to dry
- 195) The one item that is most attractive to a variety of pests in storage rooms is:
  - a) cardboard boxes
  - b) school supplies
  - c) textbooks
- 196) Which one of these statements is TRUE?
  - a) the IPM technician should never inspect student lockers

- b) donated computer equipment should be sprayed with a pesticide before installation
  - c) shower drains in locker rooms should be cleaned regularly
- 197) In cafeterias, food carts and tray carts should never be power-washed.
- a) TRUE
  - b) FALSE
- 198) Which one of these statements about power-washing is NOT true?
- a) power-washing equipment uses only hot water
  - b) power-washing may be done by the IPM technician
  - c) trash rooms with floor drains can be power-washed
- 199) Degreasing foamers can be used to clean drains in food areas.
- a) TRUE
  - b) FALSE
- 200) Full plastic trash bags should be stored \_\_\_\_\_ while awaiting trash pickup.
- a) in a pile at the pickup site
  - b) in closed containers outside
  - c) in closed containers inside
- 201) As long as recycling containers are emptied on a regular basis, they don't need additional cleaning.
- a) TRUE
  - b) FALSE
- 202) The most common cause of rat problems on school grounds is:
- a) overgrown shrubbery
  - b) rotting fruit dropped by fruit trees
  - c) poor dumpster management
  - d) puddles of water
- 203) Dumpsters should be located no closer than \_\_\_\_\_ feet from outside doors.
- a) 10
  - b) 25
  - c) 50
- 204) Which statement is NOT true about proper maintenance of dumpsters?
- a) dumpsters should be located on flat, dry soil
  - b) dumpsters should slope to a sanitary sewer drain

- c) dumpster drain openings should be plugged or screened
- 205) An alternative to installing a dumpster on a concrete pad, is to:
  - a) surround it with foundation shrubbery
  - b) use a small dumpster with wheels
  - c) install it on a bed of gravel
- 206) It's best to landscape around a dumpster enclosure with thorny shrubs and bushes like barberry or pyracantha.
  - a) TRUE
  - b) FALSE
- 207) A school should request a bigger dumpster if:
  - a) there is so much trash that the dumpster lid won't close
  - b) rats are burrowing all over the area
  - c) trash is picked up only every other week
- 208) School staff should check dumpsters:
  - a) at least twice a day
  - b) immediately after the dumpster has been emptied
  - c) before leaving at the end of the day
  - d) all of the above
- 209) Which of these pests are attracted to fruit that has fallen to the ground.
  - a) Indianmeal moths
  - b) yellowjackets
  - c) termites
  - d) all of the above

## 4.2 Pest-Proofing

- 210) Which one of these is NOT a reason to do pest-proofing?
  - a) to keep pests out of buildings
  - b) to reduce pest movement inside buildings
  - c) to kill pests trying to enter a building
- 211) Which one of these is an example of pest-proofing?
  - a) caulking cracks
  - b) applying gel bait

- c) steam cleaning
  - d) all of the above
- 212) Which of these is a potential benefit after caulking openings as part of pest-proofing in a building?
- a) saving on heating costs
  - b) solution is permanent
  - c) pests cannot easily enter
  - d) all of the above
- 213) All pest-proofing in a school should be done by the school's maintenance staff.
- a) TRUE
  - b) FALSE
- 214) The three goals of pest-proofing are exclusion, isolation, and \_\_\_\_\_.
- a) sanitation
  - b) education
  - c) harborage elimination
- 215) Pest exclusion is just as effective against larger pests like mice as it is against smaller pests like ants.
- a) TRUE
  - b) FALSE
- 216) The minimum size opening that will allow a mouse to enter a space is:
- a) 1/8-inch
  - b) 1/4-inch
  - c) 1/2-inch
  - d) 1-inch
- 217) Which one of these should be added to exterior doors to help keep pests out?
- a) door sweep
  - b) locking mechanism
  - c) outside light
- 218) Which one of these is NOT an advantage to adding a weather seal to an outside door?
- a) less outside noise
  - b) reduced air conditioning costs
  - c) exclusion of pests



- d) fresh air enters around the door frame
- 219) To keep flying insects from entering through a loading dock door, you should pest-proof by installing:
  - a) a pheromone trap
  - b) an air curtain
  - c) bird spikes
- 220) To pest-proof an outside vent, you should:
  - a) fill the opening with foam sealant
  - b) screen the opening
  - c) cover the opening with plastic sheeting
- 221) The best way to keep pests from entering a building using the space around pipes and conduits is to:
  - a) install screen around the pipes/conduits
  - b) fill the space with foam sealant
  - c) stuff the opening with wire mesh and then seal it
- 222) Which one of these is the best way to pest-proof for birds roosting on window ledges?
  - a) install bird deterrent spikes
  - b) place toxic bait on the ledges
  - c) install an air curtain
- 223) Which one of these pest-proofing techniques can result in “pest isolation” within a building?
  - a) installing thresholds under outside doors
  - b) sealing around conduits
  - c) repairing exterior screens
- 224) Which one of these is NOT a pest-proofing recommendation that an IPM technician might make to a school?
  - a) screen floor drains
  - b) repair grout around tiles
  - c) install rodent snap traps in trash rooms
- 225) When harborage sites are limited, it is possible to eliminate pest harborage sites by implementing pest-proofing measures such as caulking and sealing.
  - a) TRUE
  - b) FALSE

### 4.3 Light Management

- 226) Which one of these statements is false?
- a) bright exterior lights attract both flying and crawling pests
  - b) a large, bright light can be seen for miles, a small light for about 100 feet
  - c) schools often have bright security lights
- 227) Why do bats come to lights?
- a) to feed on insects
  - b) they are attracted to lights just as moths are
  - c) they are attracted to the heat
  - d) all of the above
- 228) If bright security lights are causing large numbers of insects to accumulate on an exterior wall where many find their way inside, the pest management professional should first:
- a) treat the wall with a pyrethroid insecticide
  - b) install light traps
  - c) discuss with the school how to change their lighting
  - d) all of the above
- 229) Which statement is true?
- a) fluorescent bulbs are low in UV light
  - b) UV light is attractive to many insects
  - c) only female insects are attracted to light
- 230) An insect may be attracted to a particular wavelength of light, but may only be attracted at a certain time of the night or at a certain time of the year or at a certain temperature.
- a) TRUE
  - b) FALSE
- 231) Why is an insect light trap (ILT) less effective at capturing insects when placed near a security light?
- a) insects are repelled by high-energy security lights
  - b) security lights will out-compete the trap's light
  - c) an ILT will trap insects effectively near a security light
- 232) Which statement is NOT true about midges?
- a) Midges mostly fly to lights in early evening
  - b) Midges mostly fly to lights near midnight

- c) Midge problems can be reduced simply by waiting until one to two hours after sunset before turning on lights during a midge outbreak
- 233) Which statement is true regarding a particular light's attractiveness to insects?
- a) high wattage bulbs attract fewer insects than do low wattage bulbs
  - b) Lights with a yellowish, pinkish, or orange tint are more likely to attract insects
  - c) Sodium vapor lamps or others with low UV output are less attractive to insects than are mercury vapor lamps and fluorescent lamps
- 234) Which situation is the most attractive to insects?
- a) indirect landscape lighting
  - b) sodium vapor security lighting in parking lot
  - c) floodlight shining from below onto a wall
- 235) How can decoy lights be used to reduce insects around lights at the school building perimeter?
- a) place bright decoy lights every 100 feet at a distance of 250 feet from the building
  - b) place bright decoy lights 50 feet from each building corner
  - c) place bright decoy lights on the roof
- 236) What statement about outdoor lighting is correct?
- a) Lighting strategies that reduce insect problems almost always come with trade-offs.
  - b) Lights that are less attractive to insects may also be dimmer and less attractive to people.
  - c) Low-pressure sodium lamps wash out most colors, for example, making them appear yellow or gray, and should be used only where color rendition is not important.
  - d) all of the above
- 237) Lighting alternatives can often reduce the insect risk without seriously affecting security.
- a) TRUE
  - b) FALSE

#### 4.4 Landscaping

- 238) What type of foundation plants are least attractive to rodents and other pests?
- a) thick ground covers
  - b) wineglass-shaped shrubs

- c) mound-shaped shrubs
  - d) all of the above
- 239) Why are thick, low-growing ground covers a contributing factor for rodents?
- a) ground covers provide protected harborage and runs for rodents
  - b) ground covers capture food and debris
  - c) ground covers are difficult to inspect
  - d) all of the above
- 240) Why are wineglass-shaped shrubs a good choice for minimizing rodent problems?
- a) they are open at the base
  - b) they provide shade
  - c) they have no fruit
  - d) all of the above
- 241) What IPM step needs to be done by the school when rodents are living in large numbers under a large area of thick, dense ground-hugging plants?
- a) institute a mass-trapping program
  - b) thin or remove the plants
  - c) use tracking powder to knock down the rodent population
- 242) Which type of plants are most likely to capture wind-blown trash?
- a) thorny shrubs
  - b) trees
  - c) wineglass-shaped shrubs
- 243) What is the primary pest management concern when trees are located close to a school building?
- a) if branches touch the building
  - b) if the trees shade the building
  - c) if leaves are not raked
- 244) Fruit and nut trees should be \_\_\_\_\_ feet away from a school building.
- a) 25
  - b) at least 300
  - c) no closer than 1,000
- 245) Where do low-growing, dense shrubs at schools pose the most frequent problems related to rats?
- a) along foundations

- b) near play areas
  - c) around dumpsters
- 246) What is the primary reason schools should avoid blooming plants near entryways and public areas?
- a) to minimize bee and wasp stings
  - b) to minimize the attractiveness of the area to rodents
  - c) to avoid competition with insect baits
- 247) Why is a string trimmer a good tool for rodent management?
- a) the noise of the trimmer drives rodents out of their burrows
  - b) it can be used to reduce weeds along fence lines and abandoned equipment
  - c) it can create flat application sites for secured, tamper-resistant bait stations
- 248) What is the primary reason millipedes, sowbugs, and crickets are found in high numbers in organic mulch?
- a) their eggs are delivered with the mulch
  - b) their prey breeds in the mulch
  - c) they feed on decaying mulch
- 249) A heavy layer of wood mulch that is right up against the building can also enable subterranean termites to bypass a termiticide soil barrier.
- a) TRUE
  - b) FALSE
- 250) Fine textured wood and bark mulches should be no deeper than \_\_\_\_\_ inches after settling.
- a) 3
  - b) 6
  - c) 12
- 251) Schools should leave a clean, dry, mulch-free border \_\_\_\_\_ wide around the structure.
- a) 3 inches
  - b) at least 1 foot
  - c) at least 3 feet
- 252) What is one way to avoid excessive moisture in mulched areas?
- a) with splash blocks and extended downspouts
  - b) by using shredded hardwood mulch
  - c) by covering mulch with leaves at the foundation perimeter

## Control Tools

### 5.1 Insect Traps

- 253) Traps are nontoxic and easy to use, and have what additional advantage?
- a) contain pests for disposal
  - b) can be checked by health inspectors
  - c) can be moved by food service workers
- 254) What is a disadvantage to using traps in a school setting?
- a) traps are difficult to use
  - b) custodians may move or discard traps
  - c) traps are non-toxic
  - d) all of the above
- 255) While primarily used for monitoring, insect traps can sometimes control insects when placed in large enough numbers.
- a) TRUE
  - b) FALSE
- 256) 4. The information a glue trap may provide includes:
- a) Relative size of a pest population
  - b) Effectiveness of current pest management procedures
  - c) Location of pests
  - d) All of the above
- 257) In what pattern should you place pheromone mating disruption devices in a room if your goal is to suppress a particular stored product pest?
- a) in a tight grid throughout the room
  - b) staggered at different heights
  - c) every five feet around the perimeter
  - d) at all doors and windows
- 258) Which of the traps below is designed to trap flies?
- a) insect light trap
  - b) window-mounted trap
  - c) jar trap
  - d) all of the above

- 259) What types of lures are best suited for yellow jacket jar traps in the fall?
- a) Protein based lures
  - b) Sweet based lures
  - c) Oil based pheromone lures
  - d) All of the above
- 260) Filth fly jar traps with commercial lures are often used indoors.
- a) TRUE
  - b) FALSE
- 261) Insect light traps will not attract moths beyond what distance?
- a) 10 feet
  - b) 25 feet
  - c) 100 feet
- 262) Insect light traps will not attract flies beyond what maximum distance?
- a) 10 feet
  - b) 25 feet
  - c) 100 feet
- 263) What position would be best to install a ceiling-hung insect light trap at a loading dock door?
- a) directly under the top door frame with the trap facing outside
  - b) 20 feet back from the door with the trap facing the door
  - c) 20 feet back from the door with the trap perpendicular to the door
- 264) If your main goal is to trap filth flies, where should place an insect light trap?
- a) within 5 feet of the floor
  - b) within 5 feet of the ceiling
  - c) hung on the ceiling
- 265) Which one of the locations below would be a good site for an insect light trap?
- a) over a food preparation area
  - b) in a narrow hallway
  - c) in front of a window
- 266) Which one of the following statements about insect light traps is true?
- a) UV bulbs dim noticeably as they lose power
  - b) the effective life of the average UV bulb is 9 months of continuous use

- c) the effective life of the average UV bulb is 16 months of continuous use
- 267) An insect light trap can become the cause of an insect infestation in a school.
  - a) TRUE
  - b) FALSE

## 5.2 Rodent Traps

- 268) There is nothing different about the use of rodent traps in IPM as compared to traditional pest control except that they are typically used more often.
  - a) TRUE
  - b) FALSE
- 269) The use of rodent traps has many advantages in a school. Which one of the following is NOT an advantage to rodent traps?
  - a) school children are often curious about traps
  - b) no risk of environmental contamination
  - c) effective against both large and small populations of rodents
  - d) tell immediately whether control was successful
- 270) Which of the following is an advantage to using traps inside a school?
  - a) health inspectors can see if rodents are present
  - b) to be effective, many traps need to be set
  - c) traps hold the rodent carcass
  - d) all of the above
- 271) One disadvantage to using traps in a school is the risk of them being moved.
  - a) TRUE
  - b) FALSE
- 272) How can you prevent children from seeing trapped mice or from interfering with the traps?
  - a) place traps inside tamper-resistant bait stations
  - b) place traps out of reach
  - c) use traps in unoccupied areas
  - d) all of the above
- 273) What has been the main improvement in the snap trap since its development over 100 years ago?
  - a) plastic construction



- b) expanded trigger
  - c) increased power
- 274) Snap traps are designed to kill rodents by what method?
- a) suffocation
  - b) shock
  - c) breaking the neck, skull, or back
- 275) Mouse snap traps are not designed to kill rats.
- a) TRUE
  - b) FALSE
- 276) Snap traps can be baited with a food bait or nest material, or left unbaited.
- a) TRUE
  - b) FALSE
- 277) Glue traps are effective against which rodents?
- a) mice
  - b) rats
  - c) both mice and rats
- 278) Glue traps kill primarily by suffocation when the rodent's face becomes trapped in the glue.
- a) TRUE
  - b) FALSE
- 279) What is a disadvantage of using glue traps against rats?
- a) they will avoid the glue traps
  - b) they generally do not die quietly or easily, and may drag off the trap
  - c) you must use larger glue traps than for mice
  - d) all of the above
- 280) What is the best way to release a nontarget animal or a child's hand from a glue trap?
- a) by pouring on cooking oil
  - b) by heating the glue
  - c) by freezing the glue
- 281) Multiple-catch traps are designed for capturing mice and not rats.
- a) TRUE
  - b) FALSE

- 282) How do multiple-catch traps capture mice?
- a) they “sweep” the mouse into the holding area
  - b) they “channel” the mouse into the trap with a double-treadle door
  - c) there are multiple-catch traps that use both methods, a) and b)
  - d) none of the above
- 283) Which statement is true about multiple-catch traps?
- a) mice will usually enter the small entrance hole without hesitation
  - b) Mouse odors in traps generally improve trap catch
  - c) mice will usually enter the trap with or without a food attractant
  - d) all of the above
- 284) When might it be a good idea to add food attractant to a multiple-catch trap?
- a) in large mouse infestations
  - b) when food is scarce
  - c) when there is a breeding population
- 285) The most effective placement strategy for any type of rodent traps is to space them evenly around the perimeter of a room or building.
- a) TRUE
  - b) FALSE
- 286) Which is NOT typically a good site for rodent traps?
- a) between the rodent’s nest and its food source
  - b) where you find lots of droppings
  - c) on open surfaces back from edges
  - d) along baseboards and other wall edges
- 287) As a general rule, how far apart should you place mouse traps along runways in a light mouse infestation?
- a) 5-10 feet
  - b) 10-20 feet
  - c) 20-30 feet
- 288) As a general rule, how far apart should you place rat traps along runways in a light rat infestation?
- a) 5-10 feet
  - b) 10-20 feet
  - c) 20-30 feet

- 289) How should you place a snap trap against a wall to trap mice?
- a) parallel to the wall
  - b) perpendicular to the wall with the trigger away from the wall
  - c) perpendicular to the wall with the trigger next to the wall
- 290) How should you place a glue trap in relation to a wall?
- a) parallel to (lengthwise) and against the wall
  - b) perpendicular and against the wall
  - c) perpendicular and three inches away from the wall
- 291) Mice seem to be avoiding your traps, although they are active around them. What is the best way to improve your capture rate?
- a) place traps every 5-10 feet around the room
  - b) change your bait on snap traps or add bait to glue boards
  - c) make trap sets with two or three snap or glue traps side by side, about an inch apart
- 292) Both snap traps and glue traps can be set on pipes and rafters if rodents are active there.
- a) TRUE
  - b) FALSE
- 293) Which of the following is a good location for trapping roof rats?
- a) along tree branches
  - b) on chain link fences
  - c) in suspended ceilings
  - d) all of the above
- 294) Outdoor traps for roof rats should be set only from dawn to dusk to avoid trapping nontarget animals like birds and squirrels.
- a) TRUE
  - b) FALSE
- 295) Which one of the statements below is true, given that rats and mice react differently to traps?
- a) place baited rat traps unset for a few days or a week so that the rats will get used to them
  - b) you can improve rat trapping results by periodically moving boxes, pallets, shelves, or other objects to create new runways that lead to your traps
  - c) getting mice used to traps can take days or weeks
- 296) What is the number one mistake made by technicians when trapping rodents?

- a) not using enough traps
  - b) not using the correct bait
  - c) not placing traps at the perimeter of each room
- 297) Which tactic can improve your long-term trapping success against mice?
- a) never leave your traps unset for more than a day
  - b) periodically move the traps several feet to new locations
  - c) keep the type of bait consistent in all areas
- 298) Good baits for Norway rats include peanut butter, hot dog slices, and sardines. Which of the following is the best bait for roof rats?
- a) prunes
  - b) bacon
  - c) liverwurst
- 299) What is the primary reason to check traps more often in warm weather?
- a) carcasses decay faster at higher temperatures
  - b) there is more rodent activity in summer
  - c) baits need replacement more often in warm weather

### 5.3 Other Control Methods

- 300) Which pest problem is best controlled with a vacuum?
- a) cockroaches in an oven
  - b) drain flies around a sink
  - c) cicada killers by a walkway
- 301) What type of pest is most likely to be successfully controlled with a vacuum?
- a) solitary
  - b) aggregating
  - c) those with complete metamorphosis
  - d) all of the above
- 302) Why would you vacuum up talc or corn starch after vacuuming pests?
- a) to clean the vacuum
  - b) to eliminate any airborne pathogens
  - c) to kill any insects living inside the vacuum bag

- 303) What filters can be used on a vacuum to minimize the risk that cockroach and other allergens could be released into the air during vacuuming?
- a) 100-series filters
  - b) 95-series filters
  - c) dust filters
- 304) How long should materials be kept at 0 degrees F. to kill most insects?
- a) 8 hours
  - b) 24 hours
  - c) 48 hours
- 305) What is a practical and effective temperature and time frame to heat-disinfest an item?
- a) 130 degrees F. for 3 hours
  - b) 160 degrees F. for 1 day
  - c) 200 degrees F. for 3 hours
- 306) What equipment is necessary to heat-treat infested materials?
- a) standard oven
  - b) commercial kiln
  - c) tarps and portable heater
  - d) any of the above
- 307) To avoid damaging wood veneer and finishes, warping lumber, or melting glues, heat treatment must be limited to 130 degrees F. or less.
- a) TRUE
  - b) FALSE
- 308) Which pest is most difficult to kill by moisture reduction alone?
- a) cockroach
  - b) psocid
  - c) springtail
- 309) Even when reduced moisture does not kill the pests directly, it may make it impossible for them to reproduce.
- a) TRUE
  - b) FALSE

#### 5.4 Pesticides

- 310) Pesticides are part of the IPM tool box as long as they are applied after action thresholds have been reached.
- a) TRUE
  - b) FALSE
- 311) In IPM, if nonchemical control methods are unavailable, impractical, ineffective, or likely to fail to reduce pests below action thresholds, then \_\_\_\_\_.
- a) pesticides can be used
  - b) the IPM program should be discontinued
  - c) action thresholds must be raised
  - d) all of the above
- 312) What pesticide strategy should you follow if school children are occupying a room or area?
- a) do not apply any pesticide
  - b) apply only bait
  - c) apply either a bait or a crack and crevice treatment
- 313) What pesticide strategy should you follow whenever possible in classrooms, hallways, cafeterias, and other common areas during school hours?
- a) apply any pesticide labeled for the site
  - b) apply insecticide baits only when children are not present in these areas.
  - c) apply spot treatments near critical areas
- 314) Some areas in schools are considered more sensitive than others. In a school infirmary, you should seek approval from school medical personnel before apply a pesticide
- a) TRUE
  - b) FALSE
- 315) Which product or application method generally produces the lowest airborne pesticide residue?
- a) insecticide gel
  - b) low-pressure crack and crevice treatment
  - c) insect growth regulator
  - d) pyrethrins space spray
- 316) For insects and other arthropod pests indoors in schools, baits are normally the first choice if an insecticide is considered necessary. Why?
- a) Baits are broad spectrum, affecting a wide range of pests

- b) Compared to many other insecticide formulations, insect baits have relatively low hazard to people
  - a) Baits easily vaporize, attracting pests from near and far
- 317) What is the main advantage of gel or injectable baits over granular or prepackaged bait stations?
- a) They are inexpensive
  - b) Bait can be placed in inaccessible cracks and crevices
  - c) They can double as caulks to seal cracks and crevices.
  - d) all of the above
- 318) What is an advantage of insect bait stations over other baits?
- a) the insecticide is enclosed and protected
  - b) the stations are very visible
  - c) they are not an attractant to school children
  - d) all of the above
- 319) When used in student areas, bait stations should be placed in areas inaccessible to children (e.g., hidden inside cabinets and equipment among other cryptic places).
- a) TRUE
  - b) FALSE
- 320) Which statement is true regarding baiting for German cockroaches?
- a) put a small amount of bait at each placement site
  - b) do not place bait in areas where cockroach fecal material is found (the fecal-focal point) .
  - c) place bait stations flush against edges
  - d) All of the above are correct.
- 321) Why should you remove old bait stations once the bait has been consumed?
- a) the site is no longer active
  - b) because cockroaches may live inside old stations
  - c) there is no need to remove old stations
- 322) Which statement is true about ant baits?
- a) bait effectiveness may change from season to season
  - b) ant baits work equally well against most household ants
  - c) place ant baits in the same locations as for German cockroaches
  - d) do not place baits near a heat source

- 323) Surveying and prebaiting ants with a nontoxic bait may save time and the unnecessary use of insecticide bait.
- a) TRUE
  - b) FALSE
- 324) Ant baits that show no activity should be moved.
- a) TRUE
  - b) FALSE
- 325) When can rodent baits be used in student areas in most school IPM programs?
- a) when placed inside tamper-resistant bait stations
  - b) only anticoagulants can be used and they must be in tamper-resistant bait stations
  - c) only in emergencies
- 326) Which statement regarding rodenticide use around schools is FALSE?
- a) only pellet baits should be used inside tamper-resistant bait stations
  - b) bait station lids must be locked or otherwise secured
  - c) each bait station should be labeled and mapped
  - d) all spoiled bait and any unused bait shall be disposed of as specified on the product label
- 327) The rodenticide active ingredient in tracking powders is generally how much more concentrated than that in baits?
- a) 2 times
  - b) 3 times
  - c) 5-40 times
- 328) Placing rodenticide baits inside rodent burrows is an acceptable method for all rodenticide bait formulations used around schools
- a) TRUE
  - b) FALSE
  - c)
- 329) Rodenticide baits should be used:
- a) Only in high schools
  - b) As a way to monitor rodent activity around schools
  - c) Preferably when school is not in session or when rodents pose an immediate health threat and other methods are considered less effective
  - d) ALL of the above are correct.