

ANSWERS

1) Answer b) is correct.

Various methods and tactics are integrated together to achieve long-term, effective control while posing low risk to people and the environment.

Answer a) is incorrect because IPM is not limited to insects but deals with all pests. Answer c) is incorrect because, while insecticides may be used in IPM, they are only one tool among many, and the proper name of IPM is Integrated Pest Management

2) Answer c) is correct.

All pesticide applications are not eliminated in IPM programs.

Answer a) is incorrect because it IS a theme of IPM to manage pests before they become a problem. . Answer b) is incorrect because IPM technicians SHOULD be choosing methods and materials that pose low risk to people and the environment while providing long-term, effective control.

3) Answer c) is correct.

Automatic application of pesticides is in total conflict with the philosophy of IPM which requires that you only use pesticides only when necessary.

Answer a) is incorrect because, while in IPM you may use two or more methods of control, the same can be said of traditional pest management. Answer b) is incorrect because, while in IPM you may use vacuums and traps, you may also do so in traditional pest management (especially traps), and you can theoretically conduct an IPM program without using vacuums or traps.

4) Answer a) is correct.

The goal of IPM programs in schools is to prevent pests through pest-proofing and sanitation rather than reacting to pest problems once they become established.

Answer b) is incorrect because eliminating pests is a reactive process and deals with the pest problem after it occurs; besides, not all pest problems require such extreme action and effort as “pest elimination”: think of the effort to eliminate one fly in a school gymnasium. Answer c) is incorrect because pest identification is only a first step in dealing with a pest problem.

5) Answer a) is correct.

Weekly perimeter treatment is not a preferred way to prevent pests because it is an automatic application of a pesticide, because nonchemical techniques such as pest-proofing (exclusion)

should be a first choice, and because perimeter treatment puts a great deal of insecticide onto an area that children could access, the outside perimeter of the building.

Answer b) is incorrect because exclusion is a preferred tactic in IPM since it requires no pesticide and it results in long-term control and pest prevention. Answer c) is incorrect because upgrading sanitation is also a primary tactic to achieve long-term control and pest prevention.

6) Answer b) is correct.

Any materials or methods used in an IPM program must be chosen because they pose a low risk to people, nontarget animals, and the environment.

Answer a) is incorrect because, in an IPM program, pests are controlled only when necessary, not on a scheduled basis. Answer c) is incorrect because prevention of pest problems through measures such as pest-proofing should be an initial as well as an ongoing step in an IPM program.

7) Answer c) is correct.

Bait application is a chemical control method since cockroach baits do contain pesticides.

Answer a) is incorrect because vacuuming is a useful nonchemical control for cockroaches. Answer b) is incorrect because sealing openings around pipes and in other areas is a nonchemical control that can help prevent movement of cockroaches. Answer d) is incorrect because traps (including sticky traps) are a good nonchemical control measure for low level infestations or in sites where pesticides cannot be used.

8) Answer c) is correct.

This is the true statement because IPM does not mean application of pesticides on a regular basis. Pesticides are used only when necessary and the products used are those that present the least risk.

Answer a) is not true because pesticides can still be used in an IPM program if other control measures are not effective. Answer b) is not true because, while baits may be a part of an IPM program, other pesticides can be used as well.

9) Answer c) is correct.

An IPM program works to prevent pest problems in the first place rather than simply responding to the problem after it has occurred.

Answer a) is incorrect because IPM is more complex than traditional pest management since it requires special training, ongoing monitoring, data evaluation and decision making, and record keeping, in addition to implementation of various control measures. Answer b) is incorrect because a good IPM technician needs special training and education above and beyond that of a regular technician.

10) Answer a) is correct.

An IPM technician should spend most of the time at the school inspecting for pests and problems contributing to pests.

Answer b) is incorrect because, while baits may be used in an IPM program, they are used only when necessary and as a result of continuous monitoring. Answer c) is incorrect since pesticides are used only when needed in a school IPM program, and therefore, should not require most of the effort. Answer d) is incorrect because, measuring application amounts may be necessary, a technician should be spending far more time monitoring for pest problems and implementing nonchemical controls.

11) Answer b) is correct.

The IPM technician is involved in the decision-making process of pest management. The technician uses the identification, inspection findings, monitoring data, and his knowledge of the pest biology and habits at the site to make the decision in an IPM program.

Answer a) is incorrect because, while the principal might be consulted, pest management decisions should be left to the IPM technician. Answer c) is incorrect because, while maintenance staff play an important role in an IPM program, the IPM technician has the necessary knowledge to manage the pests.

12) Answer c) is correct.

A void treatment places pesticide inside an enclosed space such as a wall or ceiling void where pests are hiding but that is out of the reach of children. It minimizes the amount of airborne pesticide.

Answer a) is incorrect because a fan spray is not targeted to areas where pests hide. Answer b) is incorrect because fogging places large amounts of pesticide in the air and only kills pests that are out in the open. Answer d) is incorrect because a baseboard spray does not reach insects that are hiding in cracks and crevices, or voids.

13) Answer b) is correct.

This statement is false because, unlike traditional pest management, in an IPM program, pesticides are used only when necessary. Then, low risk products are chosen and are applied in a manner that reduces exposure to people.

14) Answer a) is correct.

Pest management technicians new to IPM typically require additional training in monitoring, nonchemical tactics, low exposure pesticide application methods, communications, and IPM record keeping.

15) Answer c) is correct.

IPM seeks to prevent pests and minimize pesticide exposure risks so that technicians consider all approaches, both nonchemical and chemical, while in traditional pest management, priority is given to pesticide application because that tends to be easy, quick, and responsive to complaints.

Answer a) is incorrect because IPM is not primarily reactive but proactive, meaning that it tries to prevent pest problems in the first place or address them very early before a pest problem becomes serious. Answer b) is incorrect because, while IPM may use baits rather than sprays and dusts, IPM priority will always be on pest prevention.

16) Answer c) is correct.

This statement is true because IPM in a school requires institutional coordination and staff cooperation to correct structural deficiencies, improve sanitation, and follow the various other recommendations that help prevent or minimize pests; without these improvements, IPM cannot work.

Answer a) is not true because IPM technicians change their actions based on pest levels and current conditions. Answer b) is not true because pesticides are rarely used in a preventive way. They are used when necessary to control existing pests over the action threshold level.

17) Answer c) is correct.

This statement is true because young children crawl on the floor and touch many surfaces and then put their hands in their mouths, transferring pesticide residues.

Answer a) is not true because children have less body weight and less ability to detoxify contaminants and so are more likely to become ill from pesticide exposure. Answer b) is not true because people are less willing today to accept even small health risks from contaminants in their environment.

18) Answer a) is correct.

IPM programs are most useful and most desired in sensitive accounts like schools and hospitals where the residents are more sensitive than the general population to pesticides.

Answer b) is incorrect because, while almost all accounts can benefit from an IPM program, there are not the same concerns about pesticide exposure in a mini-storage facility where people are rarely present. Answer c) is incorrect because, while almost all accounts can benefit from an IPM program, there are not the same concerns about pesticide exposure in a lumber yard where people only spend a short period of time, and it is mostly outdoors.

19) Answer b) is correct.

Regular application of pesticides is not a benefit of an IPM program. IPM's goal is to reduce the amount of pesticide used in a school.

Answer a) is incorrect because an IPM program does identify structural, sanitation, and operational problems through regular monitoring. Answer c) is incorrect because an IPM program does reduce pesticide exposure for students, teachers, and other school staff. Answer d) is incorrect because an IPM program generally does result in effective, long-term control of pests while using less pesticide.

20) Answer c) is correct.

Young children often crawl around at floor level where most insecticide residues are applied and they commonly put their hands in their mouths.

Answer a) is incorrect because their immune system does not affect how much they are exposed to an insecticide, only to what degree that exposure affects their health. The younger the child, the less developed the immune system. Answer b) is incorrect **because classrooms should never be sprayed with pesticide when children are present, regardless of their age.**

21) Answer a) is correct.

Medical professionals want children's exposure to pesticides to be minimal and they worry about the use of pesticide sprays, dusts, and other formulations around children, or in areas where children play or study.

Answer b) is incorrect because, while the presence of any pest can be a health, most medical professionals seem to see far more of a health threat to students from pesticides. Answer c) is incorrect because cost of pest service is of little interest to medical professionals.

22) Answer b) is correct.

Many states require or recommend that schools control pests through IPM, and many other school systems are requiring IPM as well, and the number continues to grow.

Answer a) is incorrect because IPM typically requires more time at the site on the part of the technician. Answer c) is incorrect because IPM is more often a hard concept to sell because it is different, it often costs more, and it requires more cooperation from school personnel.

23) Answer c) is correct.

It often surprises those not familiar with IPM, but switching to a school IPM program nearly always results in a significant improvement in pest problems at the school.

Answers a) and b) are incorrect because pests almost never stay the same or get worse if a real IPM program is undertaken.

24) Answer d) is correct.

IPM identifies structural, sanitation, and operational problems at schools and thus helps schools to prevent other problems, such as heat loss, food contamination, poor trash management, security breaches. Most schools are pleasantly surprised to discover these unexpected benefits.

25) Answer b) is correct.

This statement is false because an IPM program requires even more input and cooperation from staff. Typically, the school administration, custodial staff, food service staff, maintenance staff, even teachers, need to be involved in the program.

26) Answer b) is correct.

School principals and other administrative staff must see that recommendations for corrective action are followed through by maintenance staff, custodians, and others.

Answer a) is incorrect because it is the job of the IPM technician to apply all pest management measures, whether chemical or nonchemical. Answer c) is incorrect because, again, it is the job of the IPM technician to evaluate the situation through monitoring and to decide if pesticides are necessary.

27) Answer c) is correct.

Depending on the pest, low pest levels may not require any control action at all. The action threshold for the particular pest determines when control will be implemented.

Answer a) is incorrect because various types of pesticides may be used when needed. It's important, however, to select pesticides that pose the least risk. Answer b) is incorrect because pesticides are allowed in an IPM program if there is a demonstrated need and if other nonchemical controls have not been effective.

28) Answer a) is correct.

An IPM program requires more paperwork, including maintaining an IPM logbook, regular monitoring reports, service reports, and summary reports.

Answer b) is incorrect because traditional pest management may require only a service ticket for each job. IPM is much more involved. Answer c) is incorrect because IPM has many more facets than traditional pest management, each requiring record keeping.

29) Answer a) is correct.

This statement is true. Since an IPM program uses many different types of controls and more extensive inspections, it requires a wider range of equipment and supplies.

30) Answer c) is correct.

This statement is true because without staff cooperation on sanitation issues, structural problems, and other pest management issues, IPM cannot be successful.

Answer a) is incorrect because the choice of pesticides in schools is based on a pesticide's potential exposure risk to students and others, not on whether or not it is "organic." Answer b) is incorrect because pesticides are only short-term solutions to pest problems.

31) Answer a) is correct.

In every school there will be certain staff members, even sometimes the principal, who may not embrace IPM tactics and insist that any pest infestation requires intensive pesticide applications and "fogging" or "fumigating."

Answer b) is incorrect because reduced use of pesticides does not mean less effective control; IPM programs typically improve the level of control in schools significantly. Answer c) is incorrect because paperwork is part of the communication process in IPM, which improves school cooperation and the success of pest management.

32) Answer d) is correct.

IPM programs emphasize different tactics and require different skills from technicians. Most technicians will need additional training and technical resources to become proficient in IPM strategies, particularly in those subjects that are emphasized in IPM such as inspection and monitoring techniques, nonchemical management tactics (from pest-proofing to trapping strategy), low exposure pesticide application methods, and communications and record keeping. Technicians need much better communication skills than are typical in pest management.

33) Answer c) is correct.

This is not a common problem because nonchemical tactics, when done properly, are typically more effective than weekly or monthly application of insecticides and other practices common in traditional pest management programs in schools.

Answer a) is incorrect because it IS a common problem at the beginning of an IPM program for staff to be unwilling to upgrade sanitation ("Managing pests is your job, not ours!") and this can make pest management very difficult. Answer b) is incorrect because it IS a common problem in school IPM programs for the maintenance department to ignore the requests for wall repairs, etc. made by the IPM technician because of the maintenance workload. Answer d) is incorrect because it IS a common problem for the principal to ignore the IPM program and so not insist on staff compliance. All these common problems need to be addressed and overcome for IPM to be effective in a school.

34) Answer b) is correct.

Most recordkeeping is the responsibility of the IPM technician and includes such records as IPM service reports, sanitation reports, corrective action notices, and entries in the logbook.

Answer a) is incorrect because the primary record keeping responsibility of the custodian is to make pest reporting entries in the logbook and to note when corrective actions have been taken. Answer c) is incorrect because the primary record keeping responsibility of a teacher is to make pest reporting entries in the logbook. Answer d) is incorrect because the primary record keeping responsibility of the principal is typically to report to the pest management company on shortcomings of the program from the school's perspective.

35) Answer d) is correct.

Administrators are responsible for providing the financial and personnel commitments necessary for IPM to succeed. If administrators do not show support for the switch to IPM, staff is not likely to cooperate, simply because it takes more effort on their part when pests are managed through IPM than by traditional pest management.

Answer a) is incorrect, because school custodians have primary responsibility for sanitation and trash management in most school areas. Answer b) is incorrect because the IPM technician is responsible for the technical operations of the program. Answer c) is incorrect because teachers have three possible responsibilities related to the IPM program: practice and encourage good sanitation practices, report in the logbook any pest sightings, problems, or conditions that might favor pests, explain the principles, objectives, and tactics of IPM to students.

36) Answer d) is correct.

The pest management company should point out structural problems and make recommendations, but the actual repairs are the responsibility of the school.

Answer a) is incorrect because proposing the IPM program is the responsibility of the pest management company. Answer b) is incorrect because the company is responsible for inspecting and performing ongoing monitoring of conditions at the school.. Answer c) is incorrect because the company and the IPM technician must communicate information related to pest management.

37) Answer d) is correct.

It is up to principal to make sure that school staff cooperates. The IPM technician can seek that cooperation but it can only be enforced by the principal or other senior school administrator.

Answer a) is incorrect because the custodian can see that the maintenance staff cooperates but cannot oversee the entire school staff. Answer b) is incorrect because teachers are responsible for enlisting cooperation from their classroom and their students, but not the entire staff. Answer c) is incorrect because, while the IPM technician can encourage cooperation, he or she does not have the authority to demand it.

38) Answer b) is correct.

This statement is false because it generally takes more effort on the part of school staff to be part of a successful IPM program. Maintenance staff will likely have to do extensive pest-proofing

and correct existing water leaks in the initial start-up of the IPM program, as well as the ongoing monitoring & repairs to prevent pest problems.

39) Answer b) is correct.

This statement is false because students have a role in learning about IPM, reporting pest problems, cleaning food out of lockers, eating only in designated areas, and putting trash into the proper containers.

40) Answer a) is correct.

The school custodian is the individual who generally responds to requests from the IPM technician for school-wide improvements in housekeeping or trash management.

Answer b) is incorrect because the maintenance department generally is responsible for repairing structural problems. Answer c) is incorrect because teachers are responsible for trash management only in their individual classrooms. Answer d) is incorrect because the cafeteria manager is responsible for sanitation only in the cafeteria area.

41) Answer b) is correct.

Teachers are in the best position to explain to students the principles, objectives, and tactics of IPM. They can even make it part of their classroom lessons since the concept of IPM is directly tied to the environment and public health.

Answer a) is incorrect because, while parents can discuss IPM with their children, they have less direct contact with or knowledge of the school program. Answer c) is incorrect because although the principal is involved in the IPM program, he/she does not have the same level of communication with students as a teacher.

42) Answer b) is correct.

This is a false statement because the IPM coordinator is a school staff person who acts as a liaison between school administration and the pest management company. He or she reviews the program, coordinates with staff, educates staff, sees that recommendations are followed, reports problems, etc. but is not directly responsible for financing the program.

43) Answer c) is correct.

School custodians have primary responsibility for sanitation and trash management in most school areas.

Answer a) is incorrect because coordinating IPM information with the faculty is the responsibility of the IPM coordinator. Answer b) is incorrect because notification of pesticide application is the responsibility of the IPM coordinator. Answer d), all of the above, is incorrect because a) and b) are incorrect.

44) Answer d) is correct.

Teachers have three possible responsibilities related to the IPM program: practice and encourage good sanitation practices, report in the logbook any pest sightings, problems, or conditions that might favor pests, explain the principles, objectives, and tactics of IPM to students.

45) Answer b) is correct.

Parents are their children's natural advocates. They may seek information about the school's IPM program, participate in advisory committees that address pest-related issues, request that they be notified in advance of certain pesticide applications.

Answer a) is incorrect because coordinating IPM-related information with faculty is the responsibility of the IPM coordinator. Answer c) is incorrect because reporting pest problems is the responsibility of those in the school. Answer d) is incorrect because a) and c) are incorrect.

46) Answer d) is correct.

School maintenance staff have responsibility for making repairs and correcting structural problems that are or could be contributing to pests, and reporting any pest problems that they observe.

47) Answer a) is correct.

IPM technicians have a long list of operational responsibilities, one of which is to communicate with school staff, both by word-of-mouth and through written reports, on IPM-related issues.

Answer b) is incorrect because fixing leaks is the responsibility of maintenance, Answer c) is incorrect because cleaning up spilled food is the responsibility of those spilling the food, or of the custodial department. Answer d) is incorrect because answers b) and c) are incorrect.

48) Answer b) is correct.

The IPM coordinator has primary responsibility for addressing conflicts and complaints related to pesticide use because he or she is the liaison between the school and the pest management company.

Answer a) is incorrect because the IPM technician cannot address a pesticide conflict because he or she is the one applying the pesticides. Answer c) is incorrect because the head custodian has no oversight role. Answer d) is incorrect because answers a) and c) are incorrect.

49) Answer b) is correct.

The procedures involved in notification of pesticide application is most often the responsibility of the IPM coordinator, who typically acts as liaison for school administration.

Answer a) is incorrect because notification should never be the responsibility of the pest management company or its staff, although notice posting, as necessary, will be. Answer c) is

incorrect because the head custodian has no role in notification procedures. Answer d) is incorrect because answers a) and c) are incorrect.

50) Answer d) is correct.

All parties present in the school have a responsibility to report pest sightings and problems in the IPM logbook.

51) Answer a) is correct.

The ultimate responsibility for the use of pesticides and reducing their hazards in a school rests squarely on the shoulder of the IPM technician.

Answer b) is incorrect because the IPM coordinator should not be directly involved in pesticide application or the choice of products and formulations. Answer c) is incorrect because the head custodian should not be directly involved in pesticide application or the choice of products and formulations. Answer d) is incorrect because answers b) and c) are incorrect.

52) Answer d) is correct.

Placing bait stations is not part of monitoring. This is a control measure that might be implemented based on the findings during monitoring.

Answer a) is incorrect because identifying and locating pests is part of the monitoring process. Answer b) is incorrect because identifying factors that contribute to pests such as holes in walls or loose screens is part of the monitoring process. Answer c) is incorrect because reporting sanitation problems such as poor trash handling is part of the monitoring process.

53) Answer b) is correct.

Different ant species have different food preferences, and sometimes food preferences change with the seasons and conditions. Some ants prefer protein-based baits; some like sugar-based baits.

54) Answer b) is correct.

Some closely related species must be managed differently. For example, the roof rat and the Norway rat are in the same genus but are different species and are controlled in different ways and in different sites.

Answer a) is incorrect because it's your ability to prevent and manage pests that is most likely to impress your customer. Answer c) is incorrect because identifying pests to species requires more effort than simply identifying them to the family level.

55) Answer a) is correct.

If there is any doubt as to the proper identification of a pest, collect several specimens and bring them back to the office where someone on staff or an outside expert can help with the identification.

Answer b) is incorrect because you need to know the pest before you can start control measures. Closely related pests may need to be managed in different ways. Answer c) is incorrect because, in an IPM program, your controls should be tailored to the specific pest. Very few controls work equally well against all pests. In fact, depending on the identification, the pest may not need to be managed at all.

56) Answer b) is correct.

Various types of monitoring traps are used to pinpoint areas of infestation, gauge the size of the infestation, and identify the pests involved.

Answer a) is incorrect because, while pesticide application might be part of an IPM program, it is not part of the monitoring process. Answer c) is incorrect because annual reports are a way to summarize and assess the IPM program, but are not part of ongoing monitoring.

57) Answer a) is correct.

This statement is true because a good inspection will tell you whether pests are present and whether they are in high enough numbers to warrant control with pesticides. The inspection can find specific infested sites where pesticides should be applied, avoiding a general application.

58) Answer c) is correct.

The school's appointed IPM coordinator or contact is your liaison. Pest-related complaints from staff or students should go through this person to simplify the communication process.

Answers a), b), and d) are incorrect because, while these people may also be important contacts, they should not be your first and primary contact unless one of them has also been designated as the IPM coordinator.

59) Answer c) is correct.

The IPM logbook which includes a pest sighting log will help you identify locations where pests have been seen or suspected since your last site visit. It tells you where to concentrate your efforts.

Answers a) and b) are incorrect because, while these are sites that should be checked, referring to the IPM logbook at the beginning points you directly toward important problem areas.

60) Answer d) is correct.

Small fecal droppings could indicate an infestation of German cockroaches. Other pests leave accumulations of droppings too, so a thorough inspection is important.

Answer a) is incorrect because rub-marks or grease marks are left by mammals with hair, such as rodents and bats, along their travel routes or around entrance holes. Answer b) is incorrect because frass is a combination of feces, debris, and wood particles left by wood-boring insects. Answer c) is incorrect because exit holes in wood are also left by wood-boring insects, not cockroaches.

61) Answer b) is correct.

This statement is false because the presence of shed insect skins may be from an old, inactive infestation. That's why it's important to clean up old evidence so that new skins or droppings will indicate an active infestation.

62) Answer a) is correct.

This statement is true because many insects fly or crawl toward natural or artificial light and will end up inside light fixtures or on window sills.

63) Answer d) is correct.

The center of the floor is not a likely place to find rodent droppings since rodents travel along edges and avoid moving across large spaces like the center of a room. They defecate in areas where they feed, travel, and nest.

Answer a) is incorrect because rodents do nest and feed inside cabinets where it is dark, food is often available, and they are protected. Answer b) is incorrect because rodents travel from place to place along edges like the wall/floor junction, so this is a likely place for droppings. Answer c) is incorrect because rodents do like to hide and nest under appliances.

64) Answer b) is correct.

Carpenter ants usually infest wood that has been softened and decayed due to extreme moisture.

Answer a) is incorrect because, while yellow jackets might nest in an attic void, they are not particularly attracted to wet areas. Answer c) is incorrect because blow flies are attracted to animal carcasses and feces. Answer d) is incorrect because crickets are found around the foundation level of a building.

65) Answer c) is correct.

Potted plants and flowers may be sources of plant feeding pests such as these.

Answer a) is incorrect because, while students may bring in cockroaches, ants, or some other pests in backpacks, they would not introduce plant-feeding pests. Answer b) is incorrect because pet rabbits might carry fleas or mites, but they would not introduce plant-feeding pests.

66) Answer a) is correct.

This statement is true because pests on the outside of a school can move into the school if they are not managed or if conditions allowing them inside are not corrected.

67) Answer a) is correct.

Ivy growing on a building's walls attracts pests, both those that feed on the ivy, and others that use the protection of the ivy for shelter.

Answers b) and c) are incorrect because, while both can be maintenance problems, they are not the reason that ivy affects pest management.

68) Answer b) is correct.

Mosquitoes lay their eggs and develop in standing water.

Answer a) is incorrect because, while ground beetles may be found around a school's foundation, they do not develop in water. Answer c) is incorrect because carpenter ants are attracted to moisture-damaged wood but they do not develop in water.

69) Answer b) is correct.

This statement is false because lights on the outside of a school building will attract certain insects, particularly flying insects, to the building where they then may find their way inside.

70) Answer b) is correct.

This statement is false because many school IPM programs include management of outside pests as well, including pests of lawns and landscape plants.

71) Answer d) is correct.

The trash pickup schedule is not an important factor in controlling plant-feeding pests, although it may be a factor in controlling other outside pests.

Answer a) is incorrect because it is important to know the amount of damage to the plant since it helps determine when controls will be implemented. Answer b) is incorrect because you may decide to use the pest's natural enemies as a control method. Answer c) is incorrect because the predicted weather may influence whether or not you can apply pesticides.

72) Answer c) is correct.

Some school areas, like the cafeteria, are considered to be "sensitive sites" because of the potential risks of a pest infestation. A cafeteria is more susceptible to pests because of the availability of food and requires a more thorough inspection.

Answer a) is incorrect because the gymnasium is an area that would not be expected to have heavy pest pressure. Answer b) is incorrect because hallways may have occasional pests but are not considered to be high-risk sensitive sites.

73) Answer c) is correct.

Sites on the “A” list are those that are most likely to be infested, such as dumpster areas.

Answer a) is incorrect because these are “C” designated sites and are the least likely to be infested. Answer b) is incorrect because these are “B” designated sites and are at moderate risk of being infested.

74) Answer b) is correct.

“C” sites should be inspected periodically.

Answer a) is incorrect because “C” sites don’t require inspection at every visit. You should, however, check the pest sighting log at every visit to see if there have been any reports from these sites. Answer c) is incorrect because no site in a school should go uninspected for long periods.

75) Answer a) is correct.

Both “A” sites (most vulnerable to pests) and “B” sites (moderately vulnerable to pests) should have pest monitors in place.

76) Answer c) is correct.

The principal’s office is only moderately vulnerable to pests since it is not considered a sensitive site and does not have heavy food pressure.

Answer a) is incorrect because food vending machines are attractive to pests and would be on the “A” list. Answer b) is incorrect because the nurse’s station is considered to be a sensitive site and is, therefore, highly vulnerable to pests. Answer d) is incorrect because a home economics classroom could have food debris and would, therefore, be on the “A” list.

77) Answer b) is correct.

A shop room in a school is not considered to be a sensitive site and would have little or no food available for pests, so it would be considered moderately vulnerable to pests.

Answers a), c), and d) are incorrect because these are all “A” list sites since they either provide food service (a and c) or they are sensitive sites (d) because they contain animals.

78) . Answer b) is correct

This statement is not true because an attic is a moderately vulnerable site and may have pest pressure, requiring periodic inspection

Attics may have stored items creating harborage areas. Periodic inspections will ensure you find rodent or squirrel droppings (and in Southern areas large roach activity) before pest populations become an issue.

79) Answer b) is correct.

This statement is false because traditional pest management applies pesticides on a schedule without much monitoring to determine pest levels. If extensive monitoring is being done, then it's usually an IPM program.

80) Answer b) is correct.

Monitoring tools trap pests, so that in most cases, you are able to get a positive identification. In visual inspections, you may not be able to capture the pest.

Answer a) is incorrect because monitoring tools cannot show you the damage done by pests, only a visual inspection can do that. Answer c) is incorrect because only a visual inspection can find problems such as poor sanitation that are contributing to the pest problem.

81) Answer a) is correct.

This is a true statement because the use of certain monitoring traps allows you to gauge the success of the program by comparing trap results from before and after controls were implemented.

82) Answer a) is correct.

Cockroach bait stations are not a monitoring tool, they are a control measure.

Answer b) is incorrect because insect sticky traps are probably the most commonly used monitoring tool. Answer c) is incorrect because pheromone traps are used in monitoring to attract certain species of insects. Answer d) is incorrect because insect light traps (ILTs) are monitoring tools that use ultraviolet lure to lure flying insects.

83) Answer a) is correct.

A pheromone trap uses chemical attractants that mimic insect pheromones to lure insects. Some pheromone traps then capture the insect on a sticky surface.

Answer b) is incorrect because insect light traps, not pheromone traps, use ultraviolet light to attract insects. Answer c) is incorrect because, while there are some insect traps that use food as a lure, these are not true pheromone traps.

84) Answer a) is correct.

This statement is true because sticky traps are used to check for the presence of various other pests such as ants, flies, mites, and stored product pests.

85) Answer b) is correct.

This statement is false because the area may be pest-free, but it's also possible that there are pests nearby which simply did not come across the sticky traps.

86) Answer b) is correct.

When you find insects recently captured on a sticky trap, you know you are dealing with some level of pest infestation.

Answer a) is incorrect because you almost never capture all of the insects in the area on sticky traps. Assume that there are more insects present. Answer c) is incorrect because whether or not pesticides are used depends on many factors, including the estimated size of the pest population and the utility of nonchemical methods. A few insects on a sticky trap may not warrant the use of pesticides or any other action.

87) Answer c) is correct.

A sticky trap catch will not tell you whether insects have damaged food or property. From the size of the catch, you may assume that there has been damage, but to actually determine that you will need to conduct a further inspection.

Answer a) is incorrect because a sticky trap does allow you to identify the pests captured.

Answer b) is incorrect because comparing the catch on various sticky traps does help you to close in on the area where pest levels are greatest.

88) Answer a) is correct.

If only adult cockroaches are captured, it indicates that it may be a new infestation that has recently moved in and has not had time to reproduce and produce nymphs.

Answer b) is incorrect because a well-developed population that has been breeding in the area for some time will have all stages of cockroaches (adults and nymphs of several sizes).

89) Answer b) is correct.

This statement is false because cockroaches all on one side of a trap indicates that the cockroaches are entering the trap from that direction, and it is on that side that you are likely to find the source of the infestation.

90) Answer a) is correct.

This statement is true because, while sticky traps are excellent monitoring tools, they only capture a portion of the active pest population.

91) Answer a) is correct.

Sticky traps can be an alternative control measure in certain sensitive areas, such as an insect rearing room, where the use of pesticides might be prohibited.

Answer b) is incorrect because sticky traps are not very effective outdoors due to dust, dirt, rain, and temperature extremes. Answer c) is incorrect because sticky trap monitors are most effective at capturing crawling pests and would not be very effective at capturing flies in a classroom.

92) Answer d) is correct.

Sticky traps should not be placed on top of light fixtures or in any other hot location since the heat may cause the glue to run and the trap could pose a fire hazard.

Answer a) is incorrect because sticky traps should be placed along pests' travel routes where they are likely to come across them. Answer b) is incorrect because sticky traps should be placed in sites where there could be food debris and spillage that attracts pests. Answer c) is incorrect because sticky traps should be placed near doorways, vents, utility line openings, and other sites where pests could enter a building.

93) Answer a) is correct.

This statement is true because pests travel along edges and in out-of-the-way locations, not across large open areas. Another reason to place traps hidden areas is that it keeps them out of the view of students and staff.

94) Answer b) is correct.

Sticky traps should be placed about ten feet apart in food storage areas. If any trap catches cockroaches, then move the trap placement closer to try to narrow in on the site of the infestation.

Answer a) is incorrect because this placement is closer than necessary in the beginning. If you have found a problem, traps may be moved closer together. Answer c) is incorrect because traps should be closer than this in a food storage area.

95) Answer b) is correct.

Place sticky traps for cockroach monitoring wherever you see cockroach spotting. The spots contain natural aggregation pheromones that draw other cockroaches to the location.

Answer a) is incorrect because cockroach sticky traps should be placed horizontally on surfaces against edges. Answer c) is incorrect because cockroach sticky traps should be placed along edges and in corners, not in the middle of open spaces.

96) Answer b) is correct.

This statement is false because sticky traps should be checked at every service visit. It's important to find a pest infestation as soon as possible so that action can be taken if needed.

97) Answer c) is correct.

Follow the manufacturer's recommendations as to when to replace sticky traps. Generally, they should be replaced after three months of use.

Answers a) and b) are incorrect because it's not necessary to replace sticky traps at every service visit, or even monthly, unless they have captured pests or have become dusty or dirty.

98) Answer a) is correct.

The number depends on factors such as school size, design, age, sanitation conditions and pest pressure at the school.

99) Answer a) is correct.

Pheromone traps are used indoors to check for the presence of certain stored product pests such as Indian meal moths and flour beetles. There are also pheromone traps for the German cockroach.

Answer b) is incorrect because Japanese beetles are found outside on plants, not inside school buildings. Answers c) and d) are incorrect because there are no pheromone traps available to monitor for house flies or crickets.

100) Answer b) is correct.

This statement is false; it's just the opposite. Sex attractant lures mimic pheromones given off by the female insect, and therefore only attract the males.

101) Answer c) is correct.

Both male and female insects will respond to an aggregation pheromone lure that is formulated for their species. An example is the German cockroach pheromone trap.

Answer a) is incorrect because it is the sexual attractant pheromone traps that lure only males. Answer b) is incorrect because females are attracted to aggregation pheromone traps, but males are as well.

102) Answer b) is correct.

This statement is false because pheromones are specific to a particular insect or a few closely-related species. A pheromone trap that will lure moths will not lure beetles unless separate lures are used for each.

103) Answer a) is correct.

A pitfall trap lures crawling insects into a container filled with oil and is used for stored product beetle pests.

Answer b) is incorrect because sawtoothed grain beetles cannot fly. Hanging pheromone traps are used mainly for stored product moths that will fly to the lure.

104) Answer a) is correct.

Pheromone traps should not be placed in areas where there are air currents such as near windows, doors, air blowers, or vents.

Answer b) is incorrect because pheromone traps should be placed in hard-to-clean areas where there could be food spillage. Answer c) is incorrect because pheromone traps for crawling insects should be placed low while traps for flying insect should be placed near the ceiling. Answer d) is incorrect because it is good practice to place pheromone traps in a grid pattern in large areas.

105) Answer c) is correct.

Pheromone traps placed outside can monitor outdoor populations of pests and can intercept migrating insects before they can enter the school.

Answers a) and b) are incorrect because placing pheromone traps near doors and windows, either inside or outside, can draw the pests to these openings where they can then enter the building.

106) Answer a) is correct.

You should tighten the grid around the trap with the capture by installing new traps about every five feet near this trap so that you can pinpoint the infestation.

Answer b) is incorrect because moving traps farther away from the trap with the catch will not help you narrow in on the source of the problem. Answer c) is incorrect because removing all nearby traps would not help you locate the infestation.

107) Answer c) is correct.

Keep a monitoring record of each trap's location in the grid on a map of the room. Each trap should be given a unique number which is marked on the map.

Answer a) is incorrect because, while the price might be of interest to others in your company, it is not important monitoring information. Answer b) is incorrect because, while it might be useful to have trap manufacturer's information, it is not considered monitoring information.

108) Answer a) is correct.

In a susceptible site, you should check pheromone traps at least once a week so that you can detect infestations immediately and stop them quickly.

Answer b) and c) are incorrect because every two weeks is too long between visits.

109) Answer b) is correct.

An insect light trap does not attract only male insects. Both sexes are equally attracted to the ultraviolet light.

Answer a) is incorrect because an ILT does kill flies and other flying insects. Answer c) is incorrect because an ILT does aid in monitoring by capturing pests that are flying in the vicinity to tell you that there is a problem. Answer d) is incorrect because an ILT does serve as an early warning system that may indicate a breakdown in sanitation or control procedures.

110) Answer b) is correct.

This statement is false because mosquitoes develop in pools of standing water which is unlikely inside a school. More likely, someone is leaving an outside door open at dusk.

111) Answer b) is correct.

Installing pheromone traps (specific for dermestid beetles) in a grid around the light trap can help pinpoint the source of the dermestid infestation.

Answer a) is incorrect because installing more light traps may capture more dermestids but is not going to help you find the source of the problem. Answer c) is incorrect because you need to find the source of the dermestid problem first, then try to eliminate it through nonchemical methods, before use of insecticides is considered.

112) Answer a) is correct.

This statement is true because winged ant reproductives are not strong fliers so it is very unlikely that they would have found their to the trap from outside, and certainly not in large numbers.

113) Answer b) is correct.

This statement is false because insect light traps used outdoors capture mostly non pest insects such as midges. ILTs should be used only indoors.

114) Answer d) is correct.

Rodent monitoring blocks do not kill rodents. They are nontoxic, food-based blocks that are used to indicate rodent activity.

Answer a) is incorrect because it is true that the blocks are attractive to mice and also to rats.

Answer b) is incorrect because it is true that rodents gnaw on the blocks and that feeding signals that rodents are present. Answer c) is incorrect because it is true that rodent monitoring blocks are usually placed in and around a building inside rodent bait stations.

115) Answer a) is correct.

The gnaw marks on the blocks are made by the rodent's incisors. With practice, you can tell which rodent has been doing the feeding. The shape and size of droppings in or near the bait station can also identify the rodent.

Answer b) is incorrect because rodent monitoring blocks are nontoxic and do not kill the rodents that feed on them. Answer c) is incorrect because both rats and mice will feed on the food-based blocks.

116) Answer b) is correct.

Wood or cellulose monitors are inserted in the ground around a building to detect termite feeding activity.

Answer a) is incorrect because insect light traps capture flying insects that are attracted to light.

Answer c) is incorrect because sticky traps capture crawling insects that are moving out in the open. Termites travel either underground or inside enclosed mud tubes.

117) Answer a) is correct.

This statement is true because ant monitors contain either nontoxic sugar-based or protein-based foods. Some baits are contained inside plastic bait stations for indoor use. Others can be placed inside bait stations designed for outdoor use.

118) Answer b) is correct.

An action threshold is the point at which an IPM technician takes action to reduce a pest's numbers. Below that action threshold, no direct control action is taken (although action may be taken to correct sanitation, clutter, and other problems that can lead to pests).

Answer a) is incorrect because the answer has absolutely no relation to action thresholds.

Answer c) is incorrect because the action threshold is the point above which action is taken, with

pesticide application as one of the options.

119) Answer a) is correct.

Below the action threshold, no direct control action is taken (although action may be taken to correct sanitation, clutter, and other problems that can lead to pests).

Answer b) is incorrect, because the technician should NOT be instituting direct control action below the action threshold. Answer c) is incorrect because monitoring should continue no matter the pest level.

120) Answer b) is correct.

Around 3 crickets in a hallway is a reasonable action threshold because 1 or 2 probably doesn't signal a serious enough problem to spend the effort necessary to eliminate them, and 3 or more probably indicates some kind of a problem with door sweeps or damage allowing cricket entry.

Answer a) is incorrect because an action threshold set at 0 would mean that a technician would have to take action of some sort, such as applying a pesticide, whether or not any crickets were seen, a concept alien to IPM in most instances. Answer c) is incorrect because some action would be needed at a level less than 10; for example, 8 crickets would in most cases indicate that there was some kind of a problem that needed to be addressed.

121) Answer c) is correct.

Sometimes action thresholds are set by the number, such as 3 ants in a kitchen; sometimes they are not in absolute numbers, such as when there is a "noticeable infestation" or whenever "people are threatened."

122) Answer d) is correct.

Since pests have been seen, you should recommend action to correct any existing sanitation/maintenance issues that may be contributing to the pest problem. If monitoring traps are already in the area, you should carefully consider increasing the number of traps or at least, expanding the grid.

Answers a) and c) are incorrect when considered alone because both components are needed when pests are seen, but remain below the action threshold. Answer b) is incorrect because pesticides are not even considered as a part of the solution until the action threshold is reached.

123) Answer b) is correct.

At its most basic in IPM programs, the action threshold for a pest is set at one, so that if even a single pest is present, a technician takes action. A simple action threshold of "1" still provides a real contrast to traditional pest management, since pesticides are never automatically applied (which would be an action threshold of zero).

Answer a) is incorrect because if action is taken whether or not pests are present, that would be a threshold level of zero. Answer c) is incorrect because an action threshold of 1 means that action IS taken if 1 or more pests are seen.

124) Answer d) is correct.

Action thresholds may vary by pest, site, season, an individual's pest tolerance, and other factors.

125) Answer b) is correct.

Eight (8) carpenter bees in 40 feet is equal to the threshold level of 1 bee per 5 linear feet.

Answer a) is incorrect because 5 carpenter bees in 40 feet is equal to a threshold level of 1 bee per 8 linear feet, less than the predetermined action threshold of 1 bee per 5 linear feet. Answer c) is incorrect because 20 carpenter bees in 40 linear feet is equal to a threshold level of 1 bee per 2 linear feet, far more (two and a half times more) than the predetermined action threshold of 1 bee per 5 linear feet.

126) Answer b) is correct.

Action thresholds are set low when health or safety are at stake. The action threshold for ticks by a school athletic field would be set much lower if Lyme disease was common in the area.

Answer a) is incorrect because a higher threshold would mean you would wait until more ticks were present before taking action in Lyme disease areas, which obviously would be counter-productive. Answer c) is incorrect because action thresholds are set low when health or safety are at stake, so it wouldn't make sense to keep the action threshold the same in Lyme disease areas.

127) Answer b) is correct.

Action thresholds are set low when health or safety are at stake. The action threshold for poisonous black widow spiders would be much lower than for garden spiders because you want to take action at a lower number in order to minimize the risk of a poisonous spider bite.

Answer a) is incorrect because a higher threshold would mean you would wait until more black widow spiders were seen than if they were garden spiders, which obviously would be the wrong action to take. Answer c) is incorrect because action thresholds are set low when health or safety are at stake, so it wouldn't make sense to keep the action threshold the same for poisonous spiders as for nonpoisonous ones.

128) Answer a) is correct.

Aesthetic damage occurs when the appearance of something is degraded. Aesthetic damage includes such things as bird droppings on windows or spider webs under an exterior canopy.

Answer b) is incorrect because damage to structural wood is primarily an economic consideration. Answer c) is incorrect because poisonous spider bites are a health issue. Answer d) is incorrect because answers b) and c) are incorrect.

129) Answer b) is correct.

Aesthetic thresholds are fairly consistent for pests that damage landscape plants. Studies have shown that the average person begins to feel that some control action is necessary when a pest has damaged roughly ten percent of the plant.

Answer a) is incorrect because most people do not notice plant damage when only 5% of the plant is affected. Answer c) is incorrect because 20% plant damage is far beyond the level at which people begin to notice damage on plants.

130) Answer b) is correct.

People often disagree on what level of a particular pest is tolerable. Some people seem unwilling to accept any level of a pest, such as an ant, while others seem willing to be overrun by them before they feel pest management action is necessary.

Answer a) is incorrect because one person will be unwilling to accept a single ant, while others seem willing to be overrun by them before they feel pest control action is necessary. Answer c) is incorrect because most people are quite happy to tell you just what level of ants they can handle.

131) Answer a) is correct.

IPM technicians can sometimes change a person's pest tolerance by providing information on pests, beneficial organisms, and the risks and benefits of control. This can work both ways, for example by explaining that no one should have to live with so many cockroaches, or by explaining that most spiders are beneficial and a few garden spiders in a bush don't need to be sprayed with a pesticide.

132) Answer a) is correct.

There is little tolerance under health codes for cockroaches, ants, mice, and other pests anywhere food is stored, prepared, or served in schools, so action thresholds typically have to be set low.

Answer b) is incorrect because ant levels in a school yard wouldn't typically be mandated by law, although fear of lawsuit might influence the setting of action thresholds low in the case of fire ants. Answer c) is incorrect because weevils on ornamental plants is an aesthetic issue not a legal issue.

133) Answer a) is correct.

This statement is true because there can be different action threshold levels that trigger different responses. For example, 2 cockroaches in a classroom might trigger an IPM technician to place

some sticky traps, while 5 cockroaches would require the placement of cockroach baits, and 20 cockroaches might require that the room be cleaned, desks emptied, harborages vacuumed, and more aggressive baiting performed.

134) Answer d) is correct.

Good IPM records create a “paper trail” to track sanitation and structural problems contributing to pests, and also document needed improvements in housekeeping and building repair that will reduce pest problems.

Answer a) is incorrect because good IPM records often address housekeeping and building repair. Answer b) is incorrect because it is only half of the answer. Answer c) is incorrect because it is only half of the answer.

135) Answer a) is correct.

Reviewing IPM records over the past few years will give technicians an historical record of which pest problems appear at the same time from year to year, and thus predict with some certainty when a certain pest might appear this year.

Answer b) is incorrect because the decision to apply a pesticide is made based on current conditions at the school, not on the historical record. Answer c) is incorrect because the decision not to apply a pesticide is made based on current conditions at the school, not on the historical record.

136) Answer d) is correct.

IPM records document all aspects of the IPM program including pest sightings, pesticide applications, other control/management actions, housekeeping problems, structural deficiencies, other problems contributing to pests, and the location of sensitive areas where pesticides (and certain other management methods) must be used carefully or not at all.

Answer a) is incorrect because pesticide applications are only part of the information that is recorded in IPM records. Answer b) is incorrect because pesticide-sensitive areas are only part of the information that is recorded in IPM records. Answer c) is incorrect because structural deficiencies are only part of the information that is recorded in IPM records.

137) Answer b) is correct.

This statement is false. Since IPM solutions integrate non-pesticide methods to solve pest issues, it is absolutely necessary to record non-pesticide tactics in IPM records.

138) Answer a) is correct.

This statement is true. In order for a school to make proper corrections to problems, it is important that technicians provide guidance on how corrections can and should be made to be effective and insure success of the IPM program.

139) Answer d) is correct.

Anyone in the school who sees a pest should report the sighting in the logbook, as should the IPM technician. The more people are using the logbook, the more useful it will be.

Answer a) is incorrect because, while school staff should report pest sightings in the logbook, so should anyone else at the school. Answer b) is incorrect because, while the IPM technician should report pest sightings in the logbook, so should anyone else at the school. Answer c) is incorrect because, while the IPM coordinator should report pest sightings in the logbook, so should anyone else at the school.

140) Answer a) is correct.

The IPM technician always initials that he or she has responded to the sighting, and records the action taken to deal with the sighting, or that no action was taken. By checking the logbook later, a staff member can be sure that the problem reported has been addressed.

Answer b) is incorrect because a pest may not be seen by people untrained in pest management even though the pest is still infesting the area. Answer c) is incorrect because it is best to encourage school staff to see the logbook as the primary source of information about pest conditions and actions at the school.

141) Answer c) is correct.

Once a pest-sighting log becomes inactive, it serves no purpose, neither school staff members nor the IPM technician looks at it anymore, and pest problems tend to get out of control.

Answer a) is incorrect because a pest-sighting log is just as functional in winter as any other time of year, even though there may be fewer pests to report. Answer b) is incorrect because the pest-sighting log becomes more effective if night workers report pest activity. Answer d) is incorrect because answers a) and b) are incorrect.

142) Answer b) is correct.

This statement is false because, to keep the pest-sighting log effective, staff should be repeatedly encouraged to use the log to report all pest sightings, and discouraged from reporting pest problems in other ways.

143) Answer a) is correct.

Because the pest-sighting log must be used regularly to be effective, whenever a technician gets a verbal report of a pest sighting, the technician should ask something like, “did you record your sighting in the log?” or say, “I didn’t see that noted in the log.”

Answer b) is incorrect because whether or not staff has taken action to control a pest, the technician still has the responsibility to do so. Answer c) is incorrect because pest sightings should be recorded in the log, not reported to the IPM coordinator.

144) Answer c) is correct.

The pest-sighting log should be located where it is always accessible and convenient for staff to use. The front office is a good location because most school staff visit it daily.

Answer a) is incorrect because a logbook can't be used after hours if it is located behind a locked door. Answer b) is incorrect because most of the school staff does not regularly visit the maintenance department office. Answer d) is incorrect because most of the school staff does not regularly visit the head custodian's office.

145) Answer a) is correct.

Many pests are most active at night and are more likely to be seen then by the night staff.

Answer b) is incorrect because the pest-sighting log's availability has nothing to do with the custodial staff's "feelings." Answer c) is incorrect because the logbook should be available to all staff at all times.

146) Answer a) is correct.

This statement is true because a pest-sighting log should be located in each building of a multiple building school or else it will primarily be used by staff in the building where it is located (not many people will walk to another building simply to report a pest).

147) Answer a) is correct.

The pest-sighting log (IPM logbook) often includes general information about the IPM program (its tactics and goals), IPM concepts, directions on how to use the logbook, contacts and technical personnel, and a service schedule so that interested staff can learn what is to be expected from the program.

Answer b) is incorrect because, while the IPM-related information may, at times, be reviewed by the technician to check on a policy or procedure particular to the school, this information is primarily for school staff. Answer c) is incorrect because legal requirements related to pesticide applications are met through service reports, notification, posting, etc., not through general IPM information in the logbook.

148) Answer a) is correct.

The IPM logbook is not a proper place for sales information. The information contained in it should be limited to pest sightings and other materials related to IPM in general and the school's IPM program in particular.

Answer b) is incorrect because the floor plan of the school is good information for an IPM logbook, particularly if it shows sensitive areas, the location of traps, bait stations, and other monitoring and control/management equipment, and pest hotspots or areas that experience

regular sanitation problems. Answer c) is incorrect because a list of contacts and technical personnel is a useful addition to an IPM logbook.

149) Answer a) is correct.

This statement is true because the various reports associated with an IPM program provide good information for school staff about the program, particularly as it relates to sanitation, structural deficiencies, and other conditions that increase pest problems.

150) Answer d) is correct.

The “IPM Service Report” or similar report is a record of what was checked, what was found, and what was done by the IPM technician on that service date. If any pesticides were applied, this form would include a description of the product, the treatment, the site, the application rate, and the amount applied (although some school IPM programs require a separate “Pesticide Application Report.”).

Answer a) is incorrect because it is only part of the answer. Answer b) is incorrect because it is only part of the answer. Answer c) is incorrect because it is only part of the answer.

151) Answer a) is correct.

In those schools that have parental notification requirements when pesticides are to be used, an “Intent to Apply Pesticides” or similar form is typically sent to the pesticide coordinator in order to provide advanced notice of pesticide application and trigger parental notification.

Answer b) is incorrect because the “Intent to Apply Pesticides” form is designed to notify the school, staff, and parents (in some school IPM programs) about the pending pesticide application, not the technician’s supervisor. Answer c) is incorrect because the “Intent to Apply Pesticides” form reports on the pesticides that will be applied, not what was applied.

152) Answer a) is correct.

An “IPM Inspection Report” is often filled out when inspecting critical areas such as the school cafeteria, and it is often in the form of a checklist to ensure that all important areas are inspected.

Answer b) is incorrect because the inspection report is typically filled out by the technician and not a supervisor. Answer c) is incorrect because, while school personnel might review the inspection report after it has been completed and submitted, they do not do so in order “to ensure that all important areas are inspected.” Answer d) is incorrect because b) and c) are incorrect.

153) Answer d) is correct.

A “Corrective Action Notice” (which can also be called a “Sanitation Report”) is filled out on the spot by the technician and given to the custodial foreman or a cafeteria manager (as

applicable). A copy of the notice should be saved in a “tickle file” so that the technician is reminded to recheck in 30 or 60 days to see that the problem has been corrected.

Answer a) is incorrect because it is only part of the answer. Answer b) is incorrect because it is only part of the answer. Answer c) is incorrect because it is only part of the answer.

154) Answer a) is correct.

When a sanitation, structural, or operational problem has been corrected, the custodian should note the action taken and the date in the IPM logbook.

Answer b) is incorrect because it is the technician refers to the logbook to see corrective measures taken. Answer c) is incorrect because, while the custodian may be required to file internal reports with the principal, he should first record the action in the logbook.

155) Answer c) is correct.

A “Quarterly IPM Report” (and any similar quality assurance report) provides a summary of IPM activities, successes, problems, and recommendations over the past three months. While it may be prepared by the IPM technician, it is more often prepared by a supervisor with input from the technician.

Answer a) is incorrect because a “Quarterly IPM Report” is prepared by an IPM professional in the company, not the school, who understands IPM policies and procedures. Answer b) is incorrect because a “Quarterly IPM Report” is prepared by an IPM professional in the company, not the school, who understands IPM policies and procedures.

156) Answer d) is correct.

The “Annual IPM Report” does not provide advanced notice of pesticide application; that is the purpose of an “Intent to Apply Pesticides” or similar form.

Answer a) is incorrect because one of the purposes of the “Annual IPM Report” is to summarize all IPM service for the past year. Answer b) is incorrect because one of the purposes of the “Annual IPM Report” is to report problems solved and problems still existing. Answer c) is incorrect because one of the purposes of the “Annual IPM Report” is to plan changes for the following year.

157) Answer d) is correct.

Compliance with school IPM policy, regulatory agency and response to public request for information are all reasons “Pesticide Use Summaries” may be required.

Answer a) is incorrect because it only one of the reasons “Pesticide Use Summaries” may be required. Answer b) is incorrect because it only one of the reasons “Pesticide Use Summaries” may be required. Answer c) is incorrect because it only one of the reasons “Pesticide Use Summaries” may be required.

158) Answer b) is correct.

Technicians can't force staff to cooperate but they can identify problems in their reports, and to some degree help educate the staff members they deal with.

Answer a) is incorrect because you can, indeed, help convince staff members of their responsibility in IPM by educating them through reports and verbal communications. Answer c) is incorrect because technicians can't force staff to cooperate by refusing service (if that were ever thought to be necessary, it would be a decision by company management, not a technician), but they can identify problems in their reports, and to some degree help educate the staff members they deal with. Answer d) is incorrect because a) and c) are incorrect.

159) Answer b) is correct.

School staff and students need to know that they should report any pests that they see in the IPM logbook, and that they can help reduce pest problems by following good sanitation practices to minimize the food available for pests.

Answer a) is incorrect because school staff and students do not need education in bait application because that is the role of the technician. Answer c) is incorrect because school staff and students do not need education in how to place and interpret monitors because that is the role of the technician. Answer d) is incorrect because a) and c) are incorrect.

160) Answer b) is correct.

This statement is false because staff rarely understand the connection between pests and sanitation, clutter, cracks and holes in walls, etc.

161) Answer d) is correct.

All school staff members need to understand the basic concepts of IPM, the specifics of the school's IPM program, and their responsibilities in reporting pests and correcting sanitation, structural, and operation problems that favor pests.

Answer a) is incorrect because all staff members need education about the IPM program, not just custodians. Answer b) is incorrect because all staff members need education about the IPM program, not just food service workers. Answer c) is incorrect because all staff members need education about the IPM program, not just maintenance and grounds personnel.

162) Answer d) is correct.

Staff should be educated through all means available including one-on-one contact with the technician and other company personnel, through the various reports and special bulletins provided by the company, and in group meetings about particular aspects of the IPM program.

Answer a) is incorrect because one-on-one contact is only one of the means of education that should be used to educate school staff about the IPM program and how it works. Answer b) is incorrect because the use of bulletins and reports is only one of the means of education that

should be used to educate school staff about the IPM program and how it works. Answer c) is incorrect because a group meeting is only one of the means of education that should be used to educate school staff about the IPM program and how it works.

163) Answer a) is correct.

IPM is an ideal topic for classes on the environment or ecology, and there are many IPM textbooks and teaching aids available. School teachers should consider incorporating IPM into their science, environmental studies, and public health curricula.

Answer b) is incorrect because IPM isn't all that complicated and anyone can understand its concepts and procedures. Answer c) is incorrect because IPM only works when every affected group participates--food workers, custodial staff, teachers, administration, etc.

164) Answer a) is correct.

While schools have differing policies on notification when pesticides are going to be applied, notification of parents and staff is usually the responsibility of the school. Some schools also send notices home to those parents who wish to be informed before pesticide application. A school may have a registry of students and staff who are sensitive to pesticides, and these people must be notified before pesticides are applied, and this also is usually the school's responsibility.

Answer b) is incorrect because the pest management company's responsibility for notification is usually limited to notifying the school and then the school notifies the parents. Answer c) is incorrect because the technician's responsibility for notification is usually limited to notifying the school and then the school notifies the parents. Answer d) is incorrect because notification of parents and staff is usually the responsibility of the school.

165) Answer c) is correct.

In those schools with parental notification of pesticide treatments, or a pesticide sensitivity register, the technician's responsibility for notification is usually limited to notifying the school with an advanced written notice of a planned pesticide application.

Answer a) is incorrect because in many schools, the technician has a role in the notification process, although that role is usually limited to notifying the school with an advanced written notice. Answer b) is incorrect because the technician is not responsible for contacting parents directly.

166) Answer a) is correct.

The statement is true because most schools exempt from the notification and posting requirements insect baits, pastes, gels, antimicrobials, or other materials used in ways presenting minimal risk of human exposure.

167) Answer b) is correct.

“Posting” is placing a written notice of a pesticide treatment in various locations including the area to be treated and common areas where people often congregate and are likely to see the notice, sites such as the school entrance and lobby.

Answer a) is incorrect because notification is the process of notifying parents (and sometimes others) of a pending treatment through the mail, e-mail, telephone, or other direct communications. Answer c) is incorrect because reporting in an IPM program is what the technician and pest management company do to report to the school on actions taken, actions needed, etc.

168) Answer a) is correct.

To be most likely to be seen, pesticide application notices (signs) should be placed in the area to be treated and common areas where people often congregate and are likely to see the notice, sites such as the school entrance and lobby.

Answer b) is incorrect because students and most staff are not likely to see a notice in the principal’s office or the cafeteria kitchen. Answer c) is incorrect because students and most staff are not likely to see a notice in the principal’s office or the grounds’ office.

169) Answer b) is correct.

To be most likely to be seen, pesticide application notices (signs) for outdoor treatment should be placed around the perimeter of the area to be treated and at the school entrance where students and staff are most likely to see the notice.

Answer a) is incorrect because students and most staff are not likely to see a notice in the principal’s office. Answer c) is incorrect because students and most staff are not likely to see a notice in the principal’s office or the grounds’ office.

170) Answer b) is correct.

IPM programs must have a more formalized, periodic review process that goes beyond the technician level, usually by a supervisor or sometimes by a third party, such as a consultant.

Answer a) is incorrect because the evaluation needs to go beyond the technician level, and, of course, the evaluation also looks at the work of the technician. Answer c) is incorrect because school staff isn’t qualified to conduct an IPM evaluation, which is the responsibility of the company providing the service (or sometimes an outside expert).

171) Answer a) is correct.

This statement is true because a formal review and evaluation process generally requires a meeting of those concerned, including various school department representatives, to solicit input on problems and successes from the school’s perspective.

172) Answer b) is correct.

The evaluation should include input from concerned parties, review of inspection reports, sanitation reports, the logbook, and other records in order to see how the program is working and to identify any changes that are necessary to improve the IPM program for the future.

Answer a) is incorrect because assigning blame is not good customer relations unless it can be done in the most diplomatic way. The evaluation can identify the shortcomings of staff in regards to sanitation and other issues without being too aggressive. Answer c) is incorrect because pesticide use is just one small part of an IPM program.

173) Answer c) is correct.

In preparing the IPM program evaluation, the reviewer seeks to answer many questions, actually far more than 10, questions such as: Were the planned procedures implemented? If not, what was different? Are all pest populations now below action thresholds? If not, why not? Were pest populations reduced in a timely manner? Have pest sightings, as recorded in the logbooks, decreased or increased? Is the monitoring program adequate? Should monitoring be increased? Can the amount of time and effort spent now be reduced without sacrificing effectiveness? Were there any negative effects from control/management measures? Were there any safety concerns with control/management measures? If so, how were they addressed? If control measures used were ineffective, should they be repeated? Should other control/management measures be tried that have not been used? What problems have been identified? Are they being adequately addressed? Was there adequate cooperation from the various school departments? If not, how can this be improved? Were there any communication problems between those responsible for implementing different aspects of the program? Have all objectives been achieved? What changes are necessary in the program? Who should be responsible for those changes?

Answer a) is incorrect because the number of questions is far too low. Answer b) is incorrect because the number of questions is still too low.

174) Answer a) is correct.

To be effective, any IPM evaluation report, whether quarterly, annual, or biannual, should be read by as many people in the school as possible.

Answer b) is incorrect because lower level staff are in many ways more important to the program than senior staff, because they deal with day-to-day operations in the school's classrooms, cafeteria, etc. Answer c) is incorrect because it eliminates too many people at the school from reviewing the evaluation report and seeing the programs successes and shortcomings.

175) Answer a) is correct.

This statement is true because 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. The report is submitted to the school and is generally available for review by anyone, is often filed in the logbook, and is a valuable resource for

educating interested parties about the IPM program.

176) Answer c) is correct.

Pesticides are a component of an IPM program, although preference should be given to control measures that do not use pesticides.

Answer a) is incorrect because, although monitoring is an important part of an IPM program, it is not a control measure. Answer b) is incorrect because record-keeping is not a pest control measure.

177) Answer d) is correct.

Trapping is not a method used to prevent pest problems. Instead, it is a control method used once pests are already present.

Answer a) is incorrect because limiting food, water, and harborage sites is probably the best way to prevent pest problems. Answer b) is incorrect because pest-proofing or blocking pests from entering is a method used to prevent pest problems. Answer c) is incorrect because eliminating conditions that attract pests is a method used to prevent pest problems.

178) Answer c) is correct.

This is the true statement because removing spilled food and garbage can eliminate an easy food source for pests.

Answer a) is not true because pests are drawn to areas with clutter that provide harborage or hiding places. Answer b) is not true because cockroaches and ants need small amounts of water on a regular basis and can get it from a drippy faucet or a puddle.

179) Answer b) is correct.

The IPM technician is generally not directly responsible for taking the measures to upgrade sanitation and housekeeping. That is the school's responsibility unless the pest management company contracts for these services separately.

Answer a) is incorrect because the technician should continually check for clutter in storage areas, closets, and classrooms. Answer c) is incorrect because it is the job of the IPM technician to identify sanitation problems and provide recommendations for how the school can correct them.

180) Answer b) is correct.

This statement is false because, unless school staff understands that pests are attracted to trash, spilled food, and other housekeeping shortcomings, they will rarely correct these conditions satisfactorily.

181) Answer a) is correct.

Sanitation is especially important in food preparation and food service areas since these sites are a ready source of food and water for pests.

Answer b) is incorrect because classrooms are less likely to provide food for pests. Answer c) is incorrect because, while bathrooms provide water for pests, food and harborage here is limited.

182) Answer a) is correct.

Food preparation surfaces should be cleaned immediately after each use before spills dry or crumbs fall to the floor to become food for pests.

Answer b) is incorrect because waiting until the end of the school day leaves food residue available for pests for several hours. Answer c) is incorrect because food and water spillage should never be left overnight when foraging pests are most active.

183) Answer b) is correct.

Kitchens should be deep-cleaned 2-3 times a year.

Answer a) is incorrect because once a year is not often enough to prevent accumulations of grease and food debris. Answer c) is incorrect because cleaning this often is more than is necessary for the typical kitchen.

184) Answer a) is correct.

This statement is true because moving or disassembling equipment allows you to get at hidden food debris, grease, and pest harborage that you would not otherwise be able to access.

185) Answer d) is correct.

Floors in food handling areas should be cleaned daily, preferably in the evening, to eliminate any food or liquid spillage that is attractive to pests.

Answer a) is incorrect because grease in exhaust filters, ovens, and grease traps should be removed regularly, but not daily. Answer b) is incorrect because floor drains should be treated regularly, but not daily, with an enzymatic or biological cleaner. Answer c) is incorrect because the catch trays in insect light traps should be emptied regularly, but not daily, to avoid secondary insect problems.

186) Answer c) is correct.

Emptying garbage cans only once a week is not proper handling of garbage. Garbage cans should be emptied daily and should never be allowed to remain with garbage overnight.

Answer a) is incorrect because garbage cans should be cleaned regularly to eliminate any spilled or dried food debris that could draw pests. Answer b) is incorrect because garbage cans should have a plastic bag liner. Check under the liner regularly for spills.

187) Answer b) is correct.

Open steel wire shelving allows any food spillage to drop through to the floor where it be easily seen and cleaned up.

Answer a) is incorrect because food spillage tends to become lodged in the grain or seams on wooden shelves. Answer c) is incorrect because food items on the floor are too accessible to pests and are difficult to clean around.

188) Answer b) is correct.

This statement is false because pallets must be at least 18 inches from the wall to create an “inspection aisle” and to allow cleaning between the wall and the pallet.

189) Answer c) is correct.

Foods that have been in storage for a long time, even unopened, are more likely to be infested with stored product pests. Older packages should be used up first.

Answer a) is incorrect because, while foods purchased some time ago may have been cheaper, that has no bearing on when they are used. Answer b) is incorrect because older foods should be at the front of the shelf with new purchases behind so that those first in will be used first.

190) Answer c) is correct.

A janitor’s closet is not a likely place for storage or preparation of food.

Answers a), b), and d) are incorrect because all of these sites either store, prepare, or serve food or drink and the same sanitation guidelines should apply as in cafeterias or kitchens.

191) Answer b) is correct.

This statement is false because food and pests can occur anywhere in a school. Food debris can also be found in lockers, classrooms, trash cans in any room, and in other sites, so good housekeeping is important throughout the school.

192) Answer a) is correct.

Fungus beetles are found in very damp sites where there is a layer of fungus growing on wood or other materials.

Answers b) and c) are incorrect because fungus beetles feed on fungus growing on surfaces and would not likely be found around spilled fruit juice or near food garbage.

193) Answer b) is correct.

Animal feed should be stored in jars, plastic ware, plastic trash cans or some similar container with a tight-fitting lid.

Answer a) is incorrect because insects can easily penetrate boxes and bags, even those that have not yet been opened. Answer c) is incorrect because, ideally, animals should be fed during the day with food removed at night since that is when most pests are actively foraging.

194) Answer c) is correct.

Mops should be rinsed, wrung out, and hung upside-down to dry after use.

Answer a) is incorrect because a wet mop left in a bucket can retain water and quickly turn “sour,” attracting pests such as fruit flies (*Drosophila*). Answer b) is incorrect because standing, scummy water is also an attractant for certain pests. Mop buckets should be emptied after use.

195) Answer a) is correct.

Cardboard boxes are very attractive to many pests, such as cockroaches, because the corrugations provide hiding places and the cardboard absorbs moisture. Cardboard boxes should be disposed of quickly.

Answer b) is incorrect because school supplies would not have any particular attraction for pests other than clutter. Answer c) is incorrect because textbooks might provide some harborage for certain pests but not to the extent of cardboard boxes.

196) Answer c) is correct.

Floor drains and shower drains in rest rooms, locker rooms, and janitorial closets must be routinely cleaned.

Answer a) is incorrect because, if school policy permits, student lockers should be inspected on a regular basis for conditions that attract pests like forgotten bag lunches and snacks. Answer b) is incorrect because computers should never be sprayed. Donated equipment and furniture should be inspected for pests which, if found, can then be controlled by methods other than chemical sprays.

197) Answer b) is correct.

This statement is false because power-washing is a good way to clean these items, as well as trash rooms, trash cans, dumpsters, compactors, and loading docks.

198) Answer a) is correct.

This statement is not true because power washing equipment comes as hot water units or cold water units.

Answer b) is incorrect because it is true that sometimes power-washing may be provided as a separate service by the IPM technician. It is usually done by school custodial staff, though.

Answer c) is incorrect because it is true that trash rooms can be power-washed.

199) Answer a) is correct.

This statement is true because small foamers filled with degreasing chemicals and foaming agents are effective in dissolving grease and food debris in drains, food carts, and other sites.

200) Answer b) is correct.

Plastic trash bags should be taken outside on a regular basis and stored in closed containers while awaiting disposal.

Answer a) is incorrect because trash bags should never be stored outside of a container since rodents and other animals and insects can easily get into plastic bags. Answer c) is incorrect because trash should not be held inside any longer than necessary since pests will be drawn into the school by the odors.

201) Answer b) is correct.

This statement is false because even after containers are emptied, sugary residues from sodas and food debris from other recycled containers remains in the bottom of the container and requires regular cleaning.

202) Answer c) is correct.

Poor dumpster management is the main cause for rats on school grounds. Dumpsters provide a ready supply of spilled food and rats like to burrow underneath them.

Answer a) is incorrect because, although dense shrubbery hides rodent burrows and collects trash, it is not as important a factor. Answer b) is incorrect because, although rats are attracted to rotting fruit, dumpsters provide a wider range of available foods at all times of the year. Answer d) is incorrect because, although rats require some water, their need for food is more important.

203) Answer c) is correct.

Dumpsters should be located at least 50 feet from outside doors.

Answers a) and b) are incorrect because dumpsters that are located less than 50 feet from the school will attract pests that may find their way into the building, plus odors are a factor.

204) Answer a) is correct.

This statement is not true because dumpsters should be placed on concrete pads so that rodents cannot burrow under the dumpster and so that cleanup of spilled debris is easier.

Answer b) is incorrect because it is true that, whenever possible, dumpsters should slope to a sanitary sewer drain to handle runoff from cleaning. Answer c) is incorrect because it is true that dumpster drain openings should be sealed (except during cleaning) or screened to keep rodents out.

205) Answer b) is correct.

If a dumpster can't be placed on concrete, use of a small dumpster on wheels allows you to see burrows underneath and to move it for cleaning.

Answer a) is incorrect because dense plantings should never be placed around a dumpster since they hide burrows and collect trash. Answer c) is incorrect because gravel would collect food and trash and make cleaning the area around the dumpster difficult.

206) Answer b) is correct.

This statement is false because shrubs of any kind around a dumpster make it difficult to see rodent burrows. Thorny shrubs, especially, collect trash and are difficult to inspect.

207) Answer a) is correct.

If there regularly is so much trash in the dumpster that the lid can't be kept closed, the school either needs a bigger dumpster or must schedule more frequent pickups.

Answer b) is incorrect because a bigger dumpster is going to do little to correct the problem of burrowing rats. Answer c) is incorrect because trash should never be left in any size dumpster for more than a few days. In warm weather, flies can lay eggs on garbage in a dumpster and complete their development in less than a week.

208) Answer d) is correct.

School staff should check dumpster areas at least twice a day. On trash pickup days, one of those times should be right after the dumpster has been emptied so any spilled or missed trash can be picked up. Dumpsters should also be checked at the end of the day since spilled trash should never be allowed to remain on the ground overnight.

Answers a), b) and c) are incorrect because each is only part of the complete answer.

209) Answer b) is correct.

Yellow jackets are strongly attracted to fermenting fruits on the school's grounds. Any fruits or vegetables lying on the ground should be removed daily.

Answer a) is incorrect because Indian meal moths develop in stored food products in kitchens and in other sites inside buildings. Answer c) is incorrect because termites are found in the soil or in the wood that they feed upon. Answer d) is incorrect because a) and c) are incorrect.

210) Answer c) is correct.

Killing pests is not a reason to do pest-proofing. Rather than killing pests, pest-proofing limits their movements.

Answer a) is incorrect because keeping pests from entering a building is a primary reason for pest-proofing. Answer b) is incorrect because limiting the movement of pests from room to room inside a building is also a reason to do pest-proofing.

211) Answer a) is correct.

Caulking cracks and repairing screens are examples of very simple pest-proofing techniques. Pest-proofing, however, can be as complex as major building repairs.

Answer b) is incorrect because applying gel bait is a chemical control measure that kills pests and is not an example of pest-proofing. Answer c) is incorrect because steam cleaning is an example of a sanitation measure but is not an example of pest-proofing. Answer d) is incorrect because b) and c) are incorrect.

212) Answer d) is correct.

All of the benefits listed are positive aspects to caulking openings as part of pest-proofing.

Answer a) is incorrect because savings on heating and cooling costs when openings are sealed is just one of the correct answers. Answer b) is incorrect because the fact that pest-proofing measures are largely permanent solutions is just one of the correct answers. Answer c) is incorrect because the exclusion of pests by pest-proofing is just one of the correct answers.

213) Answer b) is correct.

This statement is false because minor pest-proofing jobs such as screening or caulking are often done by the IPM technician, depending on the terms of the IPM contract.

214) Answer c) is correct.

Harborage elimination is one of the three goals of pest proofing, along with pest exclusion and pest isolation. Caulking openings can seal off areas that pests use for hiding.

Answer a) is incorrect because, while sanitation is an important part of an IPM program, it is not considered part of pest-proofing. Answer b) is incorrect because education is not part of pest-proofing.

215) Answer b) is correct.

This statement is false because it is much easier to exclude large pests from areas than it is to exclude small pests. There are so many small openings that can be used by small pests that finding and closing them all can be prohibitive.

216) Answer b) is correct.

In general, a mouse needs an opening of only 1/4-inch. If it can get its head through, it can enter the space.

Answer a) is incorrect because this size opening is too small for a mouse to enter. Answers c) and d) are incorrect because, while a mouse can enter through openings of these sizes, they are bigger than the minimum size required.

217) Answer a) is correct.

Door sweeps, thresholds, and weather seals can all be added to outside doors to establish a tight seal and help prevent the movement of pests into a building.

Answer b) is incorrect because a lock will do little to stop pest movement since pests usually enter around the edges of a door when there is not a tight seal. Answer c) is incorrect because an outside light will draw pests to the door where they might find a way to get in.

218) Answer d) is correct.

Air entering around the door frame is not an advantage to adding a weather seal. The purpose of a weather seal is to close openings around the door to prevent air, and pests, from entering.

Answer a) is incorrect because less outside noise and light coming through the door is an advantage to adding a weather seal. Answer b) is incorrect because adding a weather seal to a door will improve air conditioning and heating efficiency. Answer c) is incorrect because a weather seal on an outside door is an advantage since it helps to prevent migration of pests into the building.

219) Answer b) is correct.

An air curtain or air door can be installed over loading docks or other doorways that are regularly opened. The downward force of air keeps flying insects from entering.

Answer a) is incorrect because a pheromone trap may attract and capture certain flying insects but does not prevent them from entering the space in the first place. Answer c) is incorrect because bird spikes are installed as a pest-proofing measure to keep pest birds from roosting but has no effect on flying insects.

220) Answer b) is correct.

To pest-proof an outside vent, fit it with a screen of a small enough mesh size to keep out insect pests. You should not screen dryer vents, however, since that may trap lint inside the vent creating a fire hazard.

Answer a) is incorrect because using foam sealant inside the vent will block the necessary air flow. Answer c) is incorrect because covering the vent opening with plastic will block the necessary air flow.

221) Answer c) is correct.

The best way to keep both insects and rodents from entering around pipes and conduits is to stuff the space with wire mesh (which rodents can't chew through), then seal it with an appropriate filler.

Answer a) is incorrect because screening around pipes or conduits may keep rodents out but some insects will be able to pass through the screen and moisture and air movement will be a problem. Answer b) is incorrect because rodents can chew through foam sealant.

222) Answer a) is correct.

Bird deterrent spikes, pin and wire, or similar commercial products can be permanently installed on ledges or other building surfaces to keep birds from landing.

Answer b) is incorrect because baiting is not a pest-proofing measure and toxic bait should not be placed on building ledges. Answer c) is incorrect because air curtains are designed to fit over exterior doorways to prevent flying insects from entering and would not be appropriate to repel birds from ledges.

223) Answer b) is correct.

Sealing around conduits, and installing caulk, mesh, and other sealants around pipes, utility lines, and other entries into voids between rooms can isolate pests within one area.

Answer a) is incorrect because installing door on outside thresholds is designed to keep pests out of a building but does not isolate them once inside. Answer c) is incorrect because repairing screens will help keep pests out of a building but will not isolate them to one area once inside.

224) Answer c) is correct.

Installation of traps is not a pest-proofing recommendation since rodent traps are a lethal control method.

Answer a) is incorrect because screening of floor drains is a pest-proofing recommendation that can keep out phorid flies, rodents, and other pests. Answer b) is incorrect because repair of grout around wall and floor tiles in restrooms, locker rooms and other sites is a pest proofing recommendation a pest management professional could make.

225) Answer a) is correct.

This statement is true because, although many buildings simply have too many cracks and crevices to effectively seal, in others (where harborage sites are limited) a pest management professional can seal enough openings to make a difference.

226) Answer b) is correct.

This statement is false because a small light can also be seen for miles if the surrounding area is dark.

Answer a) is incorrect because it is true that bright exterior lights attract both flying insects such as moths, and crawling insects such as ground beetles. Answer c) is incorrect because it is true that schools almost always have bright security lights.

227) Answer a) is correct.

Bats are attracted to lights by the activity of the swarms of flying insects around them.

Answer b) is incorrect because bats are not attracted to the light itself. They are attracted to the insects that are drawn to the lights. Moths are programmed to orient and navigate based on the moon or another light source. Thus, artificial light confounds their navigation; and they fly endlessly around the light. Answer c) is incorrect because bats do not appear to be attracted by heat of lights but by the movement of their prey. Answer d) is incorrect because answers b) and c) are incorrect.

228) Answer c) is correct.

If a school's lights are causing pest problems, an IPM technician should first discuss with the school how to change the lighting to prevent pest problems, while still retaining security and visibility. Treating with pesticides is almost never the first step in an IPM approach. However, if the school does not take action, the pest management professional may need to use pesticides to control the pests so they do not move inside the school.

Answer a) is incorrect because any insecticide treatment will only be of limited duration and success, and will require a large amount of insecticide. Answer b) is incorrect because light traps will be outcompeted by the bright security lights. Answer d) is incorrect because answers a) and b) are incorrect.

229) Answer b) is correct.

Many insects are attracted to high UV (ultraviolet) light, such as in fluorescent bulbs.

Answer a) is incorrect because fluorescent bulbs actually have a high UV output. Answer c) is incorrect because it is, in fact, the male insect that is most often attracted to light.

230) Answer a) is correct.

This statement is true because 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. Insects and lights is a complex issue.

231) Answer b) is correct

Bright lights will typically outcompete lesser lights when it comes to attracting insects, and a security light will overwhelm the attractiveness of an ILT.

Answer a) is incorrect because insects are actually attracted to high-energy security lights, not repelled. Answer c) is incorrect because a security light will overwhelm the attractiveness of an ILT.

232) Answer b) is correct.

The statement that midges mostly fly to lights near midnight is not true; they mostly fly to lights in early evening.

Answer a) is incorrect because it is true that midges mostly fly to lights in early evening; their peak activity period is 1-2 hours after sunset. Answer c) is incorrect because it is true that midge problems can be reduced simply by waiting until one to two hours after sunset before turning on lights during a midge outbreak, because this coincides with their peak activity period.

233) Answer c) is correct.

This statement is true because many insects are attracted to UV light. Sodium vapor lamps or others with low UV output are less attractive to insects than are mercury vapor lamps and fluorescent lamps.

Answer a) is incorrect because it is not true that high wattage bulbs attract more insects, since they produce more light. Answer b) is incorrect because it is not true that insects are more attracted to light in the yellow and red portions of the spectrum.

234) Answer c) is correct.

A bright light shining onto a white wall may be the most attractive presentation of light from an insect's point of view.

Answer a) is incorrect because indirect landscape lighting tends to be low intensity and mostly shielded. Answer b) is incorrect because sodium vapor lights are less attractive to insects than most types of lights.

235) Answer a) is correct.

Bright decoy lights every 100 feet at a distance of 250 feet from the building will produce a wall of light attracting insects from the school yard and away from the school itself.

Answer b) is incorrect because the decoy lights are too close to the building and there are not enough to outcompete security lighting. Answer c) is incorrect because decoy lights on the roof would actually draw insects to the building.

236) Answer d) is correct.

Lighting strategies that reduce insect problems almost always come with trade-offs, two of which are that lights that are less attractive to insects may also be dimmer and less attractive to people, and 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.

Answer a) is incorrect because, while true, it is only part of the answer. Answer b) is incorrect because, while true, it is only part of the answer. Answer c) is incorrect because, while true, it is only part of the answer.

237) Answer a) is correct.

It is true that lighting alternatives can often reduce the insect risk without seriously affecting security, because there are less attractive light sources that still provide adequate light for security purposes. Light shields can also help reduce a light's attractiveness without significantly reducing its security effect.

238) Answer b) is correct.

Wineglass-shaped shrubs do not favor rodents and other pests because the area under them is open and unprotected, a poor burrow site for rodents, and easy to inspect.

Answer a) is incorrect because thick low-growing ground covers such as juniper hide burrows and provide ideal rodent hiding places and runways, the ground underneath is impossible to inspect, and the plants capture food debris and other trash. Answer c) is incorrect because mound-shaped shrubs provide good hiding areas for rodents and other pests and they are difficult to inspect underneath. Answer d) is incorrect because answers a) and c) are incorrect.

239) Answer d) is correct.

Thick low-growing ground covers such as juniper and ivy hide burrows and provide ideal rodent hiding places and runways, the ground underneath is impossible to inspect, and the plants capture food debris and other trash.

Answer a) is incorrect because this answer is only a part of the reason that thick, low-growing ground covers are a contributing factor for rodents. Answer b) is incorrect because this answer is only a part of the reason that thick, low-growing ground covers are a contributing factor for rodents. Answer c) is incorrect because this answer is only a part of the reason that thick, low-growing ground covers are a contributing factor for rodents.

240) Answer a) is correct.

Wineglass-shaped shrubs are open at the base so the area under them is open and unprotected, a poor burrow site for rodents, and easy to inspect.

Answer b) is incorrect because the fact that they supply shade does nothing to make the plants less attractive to rodents. Answer c) is incorrect because some wineglass plants may, in fact, produce fruit (these should never be placed close to a building). Answer d) is incorrect because answers b) and c) are incorrect.

241) Answer b) is correct.

When rodents are living in large numbers under a large area of thick, dense ground-hugging plants, pest management professionals are unable to inspect the area properly, nor can they get to many of the burrows for treatment. The best way, and sometimes the only way, to deal with the rodent problem in such a site is to remove the plants and make the area accessible for treatment and unattractive for rodents.

Answer a) is incorrect because a mass trapping program would be difficult or impossible in an area of thick, dense ground-hugging plants, and this area would likely also have birds and other non-targets that could be killed by the traps. Answer c) is incorrect because tracking powders can only be used outdoors in burrows at a building perimeter.

242) Answer a) is correct.

The thorns on thorny shrubs act as hooks that grab onto any windblown trash.

Answer b) is incorrect because trees are not very effective at capturing wind-borne trash except for a few shrubby, thorny trees such as acacia and locust. Answer c) is incorrect because wineglass-shaped shrubs are rarely a problem in capturing wind-blown trash.

243) Answer a) is correct

When tree branches touch a building it allows ants, squirrels, and rats (roof rats especially) to follow branches and enter a building.

Answer b) is incorrect because, while tree shade may make the area more attractive to certain pests, it is not a major issue. Answer c) is incorrect because, while raking leaves can help reduce the attractiveness of the area to certain pests, it is not as important as the issue of the entry to a building provided when tree branches touch the building.

244) Answer b) is correct.

A distance of 300 feet from a school is a good rule of thumb for fruit and nut trees because it is the upper limit of the foraging distance for Norway rats. It is also far enough away to limit squirrel activity near the building.

Answer a) is incorrect because 25 feet is well within the foraging distance for rats and mice, and well within the common flying distance for stinging insects around a food source. Answer c) is incorrect because 1,000 feet is excessive.

245) Answer c) is correct.

Low-growing dense shrubs are especially a problem around dumpsters because dumpsters are the number one site for rodent activity, and these shrubs make the site even more attractive to rats, as well as more difficult to inspect and treat for technicians.

Answer a) is incorrect because, while such shrubs at a building's foundation make it more likely that rats will nest there, the most serious problem is associated with the dumpsters. Answer b) is incorrect because play areas are usually not a prime site for rat activity.

246) Answer a) is correct.

Bees and wasps attracted to flowers near points of student activity greatly increase the risk that students will be stung.

Answer b) is incorrect because flowering plants offer little to attract rodents. Answer c) is incorrect because flowering plants do not compete with insect baits.

247) Answer b) is correct.

Weeds are attractive nest areas for rodents. String trimmers can be used to mechanically manage weeds along fence lines or around abandoned equipment or debris, which are particularly attractive to rodents.

Answer a) is incorrect because rodents are unaffected by the noise of string trimmers. Answer c) is incorrect because string trimmers are not designed to level ground (although it might be true in the very limited sense of clearing a patch of ground of vegetation to make station placement easier).

248) Answer c) is correct.

Organic mulches are made of plant material that gradually decomposes, and they attract millipedes, sowbugs or pillbugs, cockroaches, slugs, earwigs, and crickets and other pests that feed on decaying material.

Answer a) is incorrect because, while some eggs may be present in delivered mulch, high populations are caused by the fact that these pests feed on the decaying mulch. Answer b) is incorrect because none of the pests mentioned are predators, so they have no "prey," and instead feed on decaying vegetation.

249) Answer a) is correct.

This statement is true because termites can travel through the protective mulch above ground and any termiticide barrier in the soil and enter the building through foundation cracks, conduits, or weep holes in brick.

250) Answer a) is correct.

A layer of mulch no deeper than 3 inches will usually dry out enough at times to kill or repel any moisture-loving pests, or at least keep their population low.

Answer b) is incorrect because a layer of mulch that is deeper than 3 inches stays damp for too long and becomes very favorable for large populations of moisture-loving pests. Answer c) is incorrect because a layer of mulch that is deeper than 3 inches stays damp for too long and becomes very favorable for large populations of moisture-loving pests. A 12 inch layer of mulch would greatly favor large populations of moisture-loving pests; unfortunately, mulch this deep is not uncommon around schools.

251) Answer b) is correct.

A mulch-free border 12-inches wide provides a barrier to many moisture-dependent pests and is easy to inspect. It is best if this area is covered by gravel.

Answer a) is incorrect because a 3-inch barrier is not enough to reduce pest movement towards the building, and is not wide enough to remain intact. Answer c) is incorrect because, while it would be excellent from a pest prevention standpoint, it would never be acceptable to landscapers or school grounds departments.

252) Answer a) is correct.

Splash blocks and extended downspouts can be used to drain rainwater away from the school building and beyond the mulched area, helping to keep the mulch dry and less attractive to moisture-loving pests.

Answer b) is incorrect because shredded hardwood mulch is the most likely to hold excessive moisture and stay wet. Answer c) is incorrect because covering mulch with leaves will increase moisture retention by the mulch.

253) Answer a) is correct.

Traps contain the pest after death so the pests can be disposed of easily, and identified to species, stage, and sometimes the direction of entry, which helps determine pest population size and main infestation areas.

Answer b) is incorrect because the fact that traps can be checked by health inspectors is actually a disadvantage, since inspectors may cite kitchen operations for vermin when they find insect pests in the traps. Answer c) is incorrect because, while it is true that kitchen workers can and do often move insect traps, this movement usually makes the traps less effective because kitchen workers do not understand proper trap placement.

254) Answer b) is correct.

Custodians will often move or discard traps for reasons of their own. Good communications can help prevent this.

Answer a) is incorrect because insect traps are easy to use, not difficult to use. Answer c) is incorrect because lack of toxicity would not be a disadvantage in a school setting. Answer d) is incorrect because answers a) and c) are incorrect.

255) Answer a) is correct.

This statement is true because both sticky traps and pheromone traps can be considered a viable control tool when placed in large enough numbers. For example, cockroach traps will sometimes adequately suppress a small, focused, and isolated cockroach population, say in a pantry or around a sink if enough traps are used, and certain stored product pests in a food storage room can be suppressed when enough pheromone traps are placed in a tight grid throughout the room.

256) Answer d) is correct.

All answers are correct. A glue trap can tell you size of population. Help determine locations of the infestation and whether or not the control strategies being used are effective. Tracking trap counts over time are useful in determining control success.

257) Answer a) is correct.

Research has shown that flooding an area with a sex pheromone can be effective in controlling certain stored product moths. The pheromone dispersal is accomplished through the placement of the mating disruption control devices in a grid pattern.

Answer b) is incorrect because dispersing pheromone only based on different heights may not insure thorough distribution in a given area. Answer C is incorrect because placing the pheromone only at the perimeter may not provide sufficient coverage of the entire area to suppress mating

258) Answer d) is correct.

Fly traps come in a wide range of styles, including insect light traps, window-mounted traps, and jar traps.

Answer a) is incorrect because window-mounted traps and jar traps also trap flies. Answer b) is incorrect because insect light traps and jar traps also capture flies. Answer c) is incorrect because insect light traps and window-mounted traps also capture flies.

259) Answer b) is correct.

Yellow jackets are especially attracted to sweet based foods in the fall when other natural sources of sweet foods like nectar are scarce. Worker numbers are also at their highest and these food foragers need sweet foods for energy. Answer a) is not correct because protein sources are in more demand in the spring when the colony is just starting. Answer c) is not correct because there is not a pheromone lure available for yellow jackets and they do not forage actively on oil. Answer d) is incorrect because answers A and C are not correct.

260) Answer b) is correct.

Filth fly jar traps tend to be used more commonly outdoors because the lures may be offensive to the public.

261) Answer c) is correct.

Research has demonstrated that most flying insects, such as moths, won't respond to UV lights more than 100 feet away.

Answer a) is incorrect because moths will be attracted to UV light from far beyond 10 feet. Answer b) is incorrect because moths will be attracted to UV light from far beyond 25 feet.

262) Answer b) is correct.

Research has demonstrated that flies rarely respond if the UV light is beyond 25 feet.

Answer a) is incorrect because flies will respond to UV light at a distance beyond 10 feet, and up to 25 feet. Answer c) is incorrect because flies rarely respond if the UV light is beyond 25 feet.

263) Answer c) is correct.

A good first line of defense is a large ceiling-hung insect light trap mounted 15-25 feet inside of the school's loading dock (if there is one) or food delivery doors. The trap should be mounted perpendicular to the door. Then the light won't be seen from outside and won't attract insects into the facility.

Answer a) is incorrect because an insect light trap mounted in the door would attract insects in from outdoors. Answer b) is incorrect because a trap facing the door would attract insects in from outside.

264) Answer a) is correct.

Flies, as a rule travel closer to the floor than to the ceiling. Research has shown that traps within 5 feet of the floor will consistently capture more flies than those near the ceiling.

Answer b) is incorrect because traps near the ceiling capture fewer flies than those within 5 feet of the floor. Answer c) is incorrect because research has shown that traps within 5 feet of the floor will consistently capture more flies than those near the ceiling.

265) Answer b) is incorrect.

A narrow hallway is one of the most effective sites for an insect light trap because the flying insects are funneled close to the trap.

Answer a) is incorrect because an insect light trap over a food preparation area increases the risk that flying insects or insect parts might contaminate the food below. Answer c) is incorrect because an insect light trap in front of a window would attract outdoor insects to the window, and they might then find their way inside.

266) Answer b) is correct.

This statement is true because the effective life of the average bulb is 7,000 hours, only about 9 months. The phosphor inside loses 50% of its effectiveness after a year of continuous use.

Answer a) is incorrect because you can't tell by looking at a glowing UV bulb whether it's working at full strength. Answer c) is incorrect because by 16 months a UV light would be nearly completely ineffective. The effective life of the average bulb is 7,000 hours, only about 9 months.

267) Answer a) is correct.

This statement is true because dead insects in an ILT can attract dermestid beetles and other scavengers. If traps are not serviced often enough, scavenger pests may lay their eggs right in the trap, making the trap the source of an infestation rather than the cure.

268) Answer a) is correct.

This statement is true because rodent traps are installed the same way in IPM as in traditional pest control, but, because nonchemical methods are preferred in IPM programs, rodent traps tend to be used much more in IPM.

269) Answer a) is correct.

It is a disadvantage to using rodent traps that children are often curious about them because they may investigate them and interfere with traps that are visible and accessible.

Answer b) is incorrect because the fact that rodent traps have no risk of environmental contamination is an advantage. Answer c) is incorrect because it is true that rodent traps are effective against both large and small populations of rodents and that is an advantage to their use. Answer d) is incorrect because traps allow you to tell immediately if control was successful because the carcass is visible in the trap, and that too is an advantage to using traps.

270) Answer c) is correct.

Because traps hold the carcass, you can tell immediately if control has been successful, and you can quickly and easily dispose of the carcass and so avoid odor and insect problems from dead rodents.

Answer a) is incorrect because the fact that health inspectors can see the dead rodent is actually a disadvantage, since inspectors may cite kitchen operations for vermin when they find rodents in the traps. Answer b) is incorrect because successful trapping programs usually require many traps that must be set and checked often, a labor-intensive process, and this is a disadvantage to their use. Answer d) is incorrect because a) and b) are not advantages to using traps.

271) Answer b) is correct.

This statement is false because translocation is when rodents move rodenticide out of the target application site and into other areas. It has nothing to do with traps.

272) Answer d) is correct.

There are many ways to prevent children from seeing trapped mice or from interfering with traps including installing them inside stations, placing the traps out of reach (such as up in drop ceilings or on top of cabinets), and using them in areas that children do not go.

Answer a) is incorrect because b) and c) are also effective ways to keep children from the traps. Answer b) is incorrect because a) and c) are also effective ways to keep children from the traps. Answer c) is incorrect because a) and b) are also effective ways to keep children from the traps.

273) Answer b) is correct.

The original professional mouse trap is the wooden base, spring-operated snap trap everyone is familiar with. The main improvement since snap traps were first developed is the expanded trigger design which improves trapping success.

Answer a) is incorrect. While snap traps also may be made of plastic or metal, this is not a major change and provides no major advantage to the user. Answer c) is incorrect because the power of the traps has not increased since their original development.

274) Answer c) is correct.

When a snap trap works properly, the rodent is killed quickly when its neck, skull, or back is broken.

Answer a) is incorrect. While in rare cases, a rodent in a trap might die from suffocation, when a snap trap works properly, the rodent is killed quickly when its neck, skull, or back is broken. Answer b) is incorrect. While in rare cases, a rodent in a trap might die from shock, when a snap trap works properly, the rodent is killed quickly when its neck, skull, or back is broken.

275) Answer a) is correct.

This statement is true because mouse snap traps are simply not powerful enough to kill a rat except in rare instances with young rats.

276) Answer a) is correct.

This statement is true because snap traps can be baited with a food bait or nest material, or left unbaited. Unbaited traps work when curious rodents investigate or, more commonly, when rodents simply step on them during their regular foraging trips.

277) Answer c) is correct.

While glue traps are most often used for mice, the larger rat glue traps with a stickier surface can be used for rats. However, technicians working in schools should be aware that rats generally do not die quietly or easily on a glue trap and may carry the trap away if it is not securely anchored.

Answer a) is incorrect because glue traps can be used against both rats and mice, although they are more effective against mice. Answer b) is incorrect because glue traps can be used against both rats and mice, although they are more effective against mice.

278) Answer a) is correct.

This statement is true because a rodent trapped on a glue trap will typically struggle until its snout gets caught in the glue, resulting in the rodent's eventual suffocation.

279) Answer d) is correct.

There are disadvantages to using glue traps against rats, including that rats are neophobic and so often avoid glue traps placed in their territory. Once trapped on a glue trap, rats do not die easily, and they are strong enough to drag off a trap unless it is secured, or to pull themselves free from the trap unless it is a large trap with strong glue.

Answer a) is incorrect because b) and c) are also disadvantages to using glue traps against rats.

Answer b) is incorrect because a) and c) are also disadvantages to using glue traps against rats.

Answer c) is incorrect because a) and b) are also disadvantages to using glue traps against rats.

280) Answer a) is correct.

Cooking oil acts as a solvent for the glue and will release anything captured in it, including children, pets, snakes, and other nontargets.

Answer b) is incorrect because, while heating the glue will make it runnier, cooking oil is much more effective. Answer c) is incorrect because, while freezing the glue will make it less "sticky," anything already trapped in the glue will remain so when frozen, and it would not be very comfortable for the child!

281) Answer a) is correct.

This statement is true because multiple-catch traps are only designed to capture mice. The entry holes are too small and the mechanisms too weak to deal with rats.

282) Answer c) is correct.

There are two primary designs for multiple-catch traps. There are "wind-up" traps that "sweep" the mouse into the trap. Other traps use a double treadle door to channel the mouse into the trap.

Answer a) is incorrect because there are two primary designs for multiple-catch traps, represented by answers a) and b). Answer b) is incorrect because there are two primary designs for multiple-catch traps, represented by answers a) and b). Answer d) is incorrect because there are two primary designs for multiple-catch traps, represented by answers a) and b).

283) Answer d) is correct.

Multiple-catch traps work because mice are curious and will investigate new things in their territories. It is true that mice will usually enter the small entrance hole without hesitation, and if they smell mice they are even more inclined to do so. And mice will usually enter the trap with or without a food attractant, simply from curiosity.

Answer a) is incorrect because statements b) and c) are also true. Answer b) is incorrect because statements a) and c) are also true. Answer c) is incorrect because statements a) and b) are also true.

284) Answer b) is correct.

Mice will usually enter the small entrance hole of a multiple-catch trap without hesitation, but when food is scarce, bait will make the trap even more attractive.

Answer a) is incorrect because the size of the population has no impact on whether or not bait makes a multiple-catch trap more effective. Answer c) is incorrect because a population of mice is always a breeding population.

285) Answer b) is correct.

The statement is false because placement of traps evenly around a room is probably the least effective placement strategy. You should concentrate traps wherever you find or suspect rodent activity.

286) Answer c) is correct.

Rodents are least likely to be found out in the open away from walls, boxes, etc. so open surfaces away from edges is a poor placement sites for traps.

Answer a) is incorrect because traps placed along runways between a rodent's nest and food will get high activity, and so this is a good trapping site. Answer b) is incorrect because wherever you

find lots of droppings will be a site of rodent activity, and so it is a good trapping site. Answer d) is incorrect because rodents typically travel along baseboards and other wall edges and so this is a good trapping site.

287) Answer a) is correct.

Mice have small territories, often ranging only 10 feet from their nests. You should place snap traps or glue boards 5 to 10 feet apart, and even closer if the population is large.

Answer b) is incorrect because traps placed 10-20 feet apart can allow mice to forage between them without ever coming near the traps. Answer c) is incorrect because traps placed 20-30 feet apart can allow mice to forage between them without ever coming near the traps.

288) Answer b) is correct.

Rats have much larger territories than mice. Experience shows that traps placed 10-20 feet are usually effective in a light infestation, although they may need to be closer together if the population is large.

Answer a) is incorrect because in a light infestation the traps do not need to be that close together to be effective. Answer c) is incorrect because traps placed 20-30 feet apart can allow rats to forage between them without ever coming near the traps.

289) Answer c) is correct.

Mouse trap catches are highest when the trap is placed perpendicular to the wall with the trigger against the wall.

Answer a) is incorrect because for some reason mice are more likely to avoid traps or escape from them if they are installed parallel to the wall rather than perpendicular to the wall. Answer b) is incorrect because tests show that mice are more likely to escape from a trap when its trigger is away from the wall than when the trigger is against the wall.

290) Answer a) is correct.

When traps are placed lengthwise against the wall rodents are less likely to successfully jump over them.

Answer b) is wrong because when perpendicular to the wall it is easier for a rodent to jump over the sticky trap. Answer c) is wrong because the rodents will simply bypass the sticky trap if it is away from the wall.

291) Answer c) is correct.

Double and triple trap sets capture mice who are jumping over traps.

Answer a) is incorrect because the question stated that the mice were active around your traps so the mice are at your traps, just not being trapped. Answer b) is incorrect because while changing

the bait might improve the catch somewhat, making double and triple trap sets will prove far more effective.

292) Answer a) is correct.

The statement is true because snap traps can be fastened to pipes or beams with nails, wire, heavy rubber bands, bungee cords, Velcro straps, or hose clamps, and glue traps can be fastened to pipes (but not hot pipes) and beams with tape, wire, or nail or thumbtacks (for wood beams).

293) Answer d) is correct.

Tree branches, chain link fences, and the inside of suspended ceilings are common runways for roof rats and so they all are good trap sites.

Answer a) is incorrect because tree branches, chain link fences, and the inside of suspended ceilings are all good trap sites for roof rats. Answer b) is incorrect because tree branches, chain link fences, and the inside of suspended ceilings are all good trap sites for roof rats. Answer c) is incorrect because tree branches, chain link fences, and the inside of suspended ceilings are all good trap sites for roof rats.

294) Answer b) is correct.

This statement is false because dawn to dusk is a bad time to trap for roof rats because daylight hours are when birds, squirrels, and many other nontarget animals are active, and because roof rats are most active at night. Dusk to dawn is the best time to trap roof rats.

295) Answer a) is correct.

Rats are wary of anything new in their territory and will initially avoid it. At the beginning of a trapping program for rats, place baited traps unset for a few days or a week so that the rats will get used to them.

Answer b) is incorrect. Rats are wary of anything new in their territory, including anything that changes position. If you move boxes, pallets, etc. it will reduce trap effectiveness against rats. Answer c) is incorrect because mice are very curious and will inspect traps as soon as they appear. Trap success against mice tends to be the best when the traps are first placed.

296) Answer a) is correct.

Technicians typically use far too few traps to be effective. A large number of snap traps or glue traps set for a short time will be more effective than a small number of traps set for a long time. Thirty traps in an infested 12' x 15' room would not be too many.

Answer b) is incorrect because, although the type of bait can make a difference in trapping success with snap traps, the improvement in trap catch from a bait change tends to be much smaller than from increasing the number of traps to an adequate level. Answer c) is incorrect

because most technicians seem to place too many traps on the perimeter, not too few, and ignore other sites of rodent activity.

297) Answer b) is correct.

Moving the traps several feet to new locations takes advantage of the mouse's natural instinct to investigate new things.

Answer a) is incorrect because it is actually good trapping strategy after a week of trapping success to unset your traps for a week to break the connection between traps and dead rodents in the minds of the remaining rodents. Answer c) is incorrect because you should actually do the opposite in many cases: that is, use different types of baits.

298) Answer a) is correct.

Roof rats prefer more vegetarian foods such as raisins or prunes, grapes, nuts, or pieces of bananas, oranges, or apples.

Answer b) is incorrect because, while bacon is a good bait for Norway rats, it is not so good for roof rats. Answer c) is incorrect because, while liverwurst is a good bait for Norway rats, it is not so good for roof rats.

299) Answer a) is correct.

The main reason for checking traps more often in warm weather is because the carcasses decay faster and so produce odor faster and attract scavenger insects sooner, and those insects can go through their life cycles faster to generate insect problems in the school.

Answer b) is incorrect because, while there might be more rodent activity outdoors in warm weather, indoor activity is typically highest in the fall and winter. Answer c) is incorrect because bait replacement is a function of activity, independent of season.

300) Answer a) is correct.

Cockroaches in an oven are perfectly suited for control with a vacuum. They are clustered together and traditional control methods would be unacceptable (insecticides) or ineffective (traps).

Answer b) is incorrect because it is difficult to vacuum flying pests and because drain fly control is dependent on eliminating the breeding site, not harvesting the adult flies. Answer c) is incorrect because cicada killers would be extremely difficult to vacuum.

301) Answer b) is correct.

Aggregating pests are found in large, dense groups that make vacuuming very easy and effective.

Answer a) is incorrect because solitary insects do not group together, and so it is very labor intensive to track them all down with a vacuum. Answer c) is incorrect because an insect's type

of metamorphosis has nothing to do with suitability for vacuuming. Answer d) is incorrect because a) and c) are incorrect.

302) Answer c) is correct.

Larger insects may not be killed by the physical action of the vacuum. Talc or corn starch acts as a desiccant and abrasive to kill all insects in the vacuum bag.

Answer a) is incorrect because vacuuming talc or corn starch makes the vacuum dirtier not cleaner. Answer b) is incorrect because there is no evidence that talc or corn starch have any impact on airborne pathogens.

303) Answer a) is correct.

Series 100 filters are designed to filter nearly 100% of particles 0.3 microns or larger, the standard to filter allergens.

Answer b) is incorrect because series 95 filters allow 5% of particles 0.3 microns or larger to get through, an unacceptable level for removing allergens. Answer c) is incorrect because simple dust filters do not filter out many common allergens.

304) Answer c) is correct.

To be sure of a complete kill of all stages of most insects, an item would have to be held at 0 degrees F. for 48 hours.

Answer a) is incorrect because 8 hours is not long enough to be sure of a complete kill of all stages of most insects. Answer b) is incorrect because 24 hours is not long enough to be sure of a complete kill of all stages of many insects.

305) Answer a) is correct.

Holding a specimen at a temperature of 130 degrees F. for three hours will kill any insect.

Answer b) is incorrect because it is excessive and likely to damage many items being treated. Answer c) is incorrect because it is excessive and likely to damage many items being treated.

306) Answer d) is correct.

Any method that can hold a temperature of 130 degrees F. for three hours is acceptable. Small items can be heated in an oven to kill infesting pests. Larger items may require a commercial kiln. Items can also be placed under tarps and portable forced-air heaters used to raise the temperature to the desired level.

Answer a) is incorrect because all the equipment listed, a), b), and c) can be used to heat-treat infested materials. Answer b) is incorrect because all the equipment listed, a), b), and c) can be used to heat-treat infested materials. Answer c) is incorrect because all the equipment listed, a), b), and c) can be used to heat-treat infested materials.

307) Answer b) is correct.

This statement is false because even a temperature of 130 degrees F. for three hours will, in fact, damage many veneers or the finish of certain specimens, and can warp lumber or melt glues.

308) Answer a) is correct.

While many species of cockroach prefer moisture, they are also resistant to desiccation (drying out) because of their thick, oily cuticle, so cockroaches are not likely to be controlled by moisture reduction alone.

Answer b) is incorrect because psocids are susceptible to desiccation, and can often be controlled by moisture reduction alone. Answer c) is incorrect because springtails are susceptible to desiccation, and can often be controlled by moisture reduction alone.

309) Answer a) is correct.

This statement is true because many pests can survive low moisture levels but are unable to reproduce; sometimes they can reproduce but their offspring cannot survive at the low moisture levels, and so the population eventually crashes.

310) Answer a) is correct.

This statement is true because pesticides can be used when justified by reaching the action threshold and when nonchemical controls are not a good choice. However, pesticides should not be applied automatically or as a standalone tool. Even when applying pesticides, nonchemical control methods should continue, where appropriate.

311) Answer a) is correct.

Pesticides can be part of a school IPM program if nonchemical measures would not provide adequate control.

Answer b) is incorrect because the program should continue to use nonchemical measures along with the careful use of pesticides as part of a total IPM program. Answer c) is incorrect because action thresholds should not be raised when control methods are failing. Instead, more effective controls must be implemented. Answer d) is incorrect because answers b) and c) are incorrect.

312) Answer a) is correct.

Pesticides of any type should not be applied by any application method to a room if there are children present. Pesticides, when used in a school, must always be used in a way that minimizes risk to children.

Answer b) is incorrect because, while bait is a good pesticide choice for schools, it should not be applied when children are present. Answer c) is incorrect because, while crack and crevice is a good choice of application method, it should not be done while children are present.

313) Answer b) is correct.

Only insecticide baits should be used in classrooms, hallways, cafeterias and other common areas during school hours. Even these products should not be applied when children are present.

Answer a) is incorrect because even pesticides labeled for the site should not be used during school hours unless they are baits, and then they should not be applied if children are present. Answer c) is incorrect because no airborne pesticides should be applied in common areas during school hours.

314) Answer a) is correct.

Check with school medical personnel before any pesticide application is made in this area. Before using pesticide in any manner or in any area that is not covered under the standard IPM protocol, discuss the need for the use with your supervisor. In this case, you should obtain clearance from the school's medical staff before treating the area, and you must make sure to follow all posting and notification required by the school.

315) Answer a) is correct.

Insecticide gel baits are low in volatility and so produce virtually no airborne vapors, compared to other application methods.

Answer b) is incorrect because, while crack and crevice treatment does place insecticide in out-of-the-way places, there is the potential for airborne particles. Answer c) is incorrect because, although insect growth regulators are relatively nontoxic to people, they do produce airborne residues during application. Some insect growth regulators are volatile and will move off from the site of application. This can be an advantage from a control standpoint in certain environments. Answer d) is incorrect because a space spray produces a large amount of airborne insecticide residues and should be avoided in schools.

316) Answer b) is correct.

Insect baits have a low toxicity to people and are low in volatility, thus they are a preferred formulation in sensitive environments.

Answer a) is incorrect because baits tend to be specific for certain pests and do not affect all pests. Different baits must be used for cockroaches and ants. Answer c) is incorrect because baits do not easily vaporize which is an advantage when used around people.

317) Answer b) is correct.

Injectable insect baits can be applied in small amounts that can be hidden inside cracks, crevices, and voids - away from children and animals.

Answer a) is incorrect because injectable baits tend to be more expensive than some other bait formulations. Answer c) is incorrect because gel baits are not designed to be applied as caulks. Answer d) is incorrect because answers a) and b) are incorrect.

318) Answer a) is correct.

Bait stations protect the bait inside from moisture and dust and keep it from drying out. Because the insecticide is enclosed in a plastic station, it keeps it away from children and nontarget animals.

Answer b) is incorrect because although the stations are very visible, this is not an advantage when they are used in schools, because children may find the stations and remove or play with them. Answer c) is incorrect because children can find the bait stations attractive and may remove or play with them. Answer d) is not correct because answer b) and c) are not correct.

319) Answer a) is correct.

This statement is true because bait stations can be highly visible and attractive to children and so they should be placed out-of-sight and inaccessible to children as much as possible. Place them under shelves, under or inside equipment, inside cabinets, and in other inaccessible areas.

320) Answer b) is correct.

Areas with cockroach spotting are prime spots for applying bait since it indicates regular cockroach activity and pheromones draw other cockroaches to these sites.

Answer a) is incorrect because you should place a small amount of bait at many treatment sites rather than placing large amounts of bait in only a few sites. Answer c) is incorrect because you should place bait stations against edges since cockroaches travel along edges rather than out in the open. Answer d) is incorrect because it is good practice to remove old gel bait periodically before reapplying new bait.

321) Answer b) is correct.

Once cockroaches have consumed all of the bait inside a bait station, the container can actually provide a protected hiding place for cockroaches.

Answer a) is incorrect because if cockroaches have eaten all of the bait, you should assume that the location is still an active feeding site and should install a new bait station. Answer c) is incorrect because old bait stations should be removed and replaced with new stations to provide a fresh supply of bait.

322) Answer a) is correct.

This statement is true because the feeding preferences of ants often varies from season to season as their diet switches from protein foods to carbohydrates. A bait that works at one time of year may not work at another time.

Answer b) is not true because different species of pest ants often prefer different types of food bait. Answer c) is not true because ant baits should be placed primarily along ant travel ways so that ants intercept the bait as they move from the nest to a food or water source. Answer d) is not true because ants like sources of heat so these are good locations for bait placement.

323) Answer a) is correct.

This statement is true because prebaiting with a food bait can help locate active feeding sites for the ants. Rather than baiting all sites, prebaiting can mean fewer bait placements when you substitute toxic bait.

324) Answer a) is correct.

This statement is true because if ants are not feeding at a particular bait placement, you should remove the bait from that site and relocate it to a new spot.

325) Answer c) is correct.

Rodent baits should not be used in student areas of schools unless there is a health emergency requiring rodent populations to be quickly reduced and when other methods will not provide adequate control.

Answer a) is incorrect because, while it is true that rodent baits, when used in student areas, must be in tamper-resistant bait stations, this is not the main restriction against their use. Answer b) is incorrect because the use of anticoagulants and tamper-resistant bait stations is not the main restriction against the use of rodent baits in schools.

326) Answer a) is correct.

This statement is false because loose pellet baits can be shaken out of a poorly anchored station, and rodents can carry the bait to new locations. Block baits anchored on a rod inside the station are preferred.

Answer b) is true because lids must be locked or secured so that children and animals cannot get to the bait. Answer c) is true because each bait station should have a unique identifying number keyed to a location on a map or drawing of the area. Answer d) is true because spoiled or uneaten bait must be disposed of safely according to the label's directions.

327) Answer c) is correct.

The active ingredient in rodent tracking powders is generally 5 to 40 times more concentrated than the active ingredients found in rodent baits.

Answers a) and b) are incorrect because these numbers are too low; tracking powders are much more concentrated.

328) Answer b) is correct.

Not all rodenticide baits are labeled for burrow applications therefore they should not be used in burrows

329) Answer c) is correct.

Rodenticides should only be used for emergencies or during times when students are not present. Answer A is not correct because the use of rodenticides is not restricted to high schools. Answer B is incorrect because they should not be used as monitoring tools or for preventative rodent control in a school. Answer D is not correct because answers A and B are not correct.