PRACTICE EXAM 4: PEST CONTROL LICENSE EXAM PREP - GENERAL U.S. CORE AND STRUCTURAL PEST CONTROL (100 QUESTIONS)

This standalone 100-question practice exam continues the general U.S. simulation used in Practice Exams 1-3. It is based on EPA commercial-applicator core competencies and the federal industrial, institutional, structural, and health-related category, with additional structural-pest biology and IPM scenarios. Choose the single best answer for each question. There is no single federal pest-control licensing exam time limit or passing score; state, territorial, tribal, and certain federal programs administer certification and may impose additional requirements.

1. A service company handout recommends a treatment rate that is higher than the maximum on the pesticide label. Which rate should the applicator use?

A. The higher company rate whenever the pest population is severe.
B. The higher rate if the customer signs a written authorization.
C. A rate that does not exceed the maximum permitted by the pesticide labeling.
D. Any rate selected by the certified applicator after inspection.

2. A technician is assigned to control stored-product insects inside a grain elevator. Under EPA’s federal commercial categories, which category includes that site?

A. Agricultural plant pest control.
B. Industrial, institutional, structural, and health-related pest control.
C. Aquatic pest control.
D. Right-of-way pest control.

3. A pesticide label states, “Do not apply to food-contact surfaces.” How should an applicator interpret that sentence?

A. As optional advice that may be ignored when residue is wiped later.
B. As a recommendation that applies only to uncertified technicians.
C. As guidance that can be changed by the customer in writing.
D. As a mandatory prohibition that must be followed during the application.

4. Under the federal certification rule, which person generally must be certified to apply or supervise the use of a restricted use pesticide?

A. A person who applies or supervises restricted use pesticides under the applicable certification program.
B. Any customer who occupies a building after a general-use pesticide treatment.
C. Every employee who performs pest inspections without applying any pesticide.
D. A manufacturer sales representative who only discusses registered products.

5. What is the federal minimum age for a person seeking pesticide applicator certification under EPA's revised certification standards?

A. 16 years old for every commercial applicator.
B. 18 years old.
C. 21 years old for every restricted-use category.
D. There is no federal minimum age requirement.

6. A state certification program requires a commercial applicator to meet a rule that is stricter than the federal baseline. What should the applicator do?

A. Follow only the federal minimum because state rules cannot be stricter.
B. Choose whichever requirement is less restrictive for the service company.
C. Ignore the state rule whenever the pesticide is a general-use product.
D. Meet the applicable state requirement in addition to federal labeling and law.

7. Which statement about restricted use pesticides is most accurate under the federal certification framework?

A. They may be used by any adult if the application is made outdoors.

B. They are legal for untrained employees whenever the customer is absent.

C. They may be used by a certified applicator or a qualifying noncertified applicator working under direct supervision.

D. They become general-use pesticides when diluted below the label rate.

8. A customer asks a technician to use an outdoor-only insecticide inside a wall void because the same insect is present there. What is the correct response?

A. Apply it indoors if the amount is less than one-half the outdoor rate.

B. Apply it indoors only after the customer signs a waiver.

C. Use it indoors if the wall void is inaccessible to occupants.

D. Decline that use unless the applicable labeling authorizes the indoor site and method.

9. Which statement is required on labeling for registered pesticide products as the general federal misuse statement?

A. Only licensed companies may purchase or possess this pesticide product.

B. This pesticide may be applied to any site where the target pest occurs.

C. Use of this product is optional whenever nonchemical controls are available.

D. It is a violation of federal law to use this product in a manner inconsistent with its labeling.

10. Which choice best describes a commercial applicator under EPA’s federal certification standards?

A. Only an applicator employed by a government agency.

B. Only an applicator who treats residential structures for payment.

C. An applicator who does not meet the federal definition of a private applicator.

D. Any homeowner who applies a consumer pesticide on personal property.

11. EPA’s core competency standards for commercial applicators include which subject?

A. Preparing company payroll and employee tax filings.

B. Understanding pesticide formulations and application equipment.

C. Negotiating property leases for pesticide storage facilities.

D. Designing pesticide advertising campaigns for retail customers.

12. EPA’s revised certification standards establish what maximum recertification interval for commercial and private applicators?

A. Five years.

B. One year.

C. Ten years.

D. Certification never requires renewal under federal standards.

13. Which application methods are specifically identified by EPA as requiring specialized certification under the revised federal standards?

A. Crack-and-crevice and spot treatments.

B. Fumigation and aerial application.

C. Bait placement and mechanical trapping.

D. Hand wiping and vacuuming of pest debris.

14. A label permits treatment in warehouses but not in occupied classrooms. Which proposed application is consistent with the labeling?

A. Treat a classroom after reducing the rate by half.

B. Treat a classroom if students are absent for the weekend.

C. Treat any indoor site when the same pest species is present.

D. Treat only an authorized warehouse site using the labeled method and rate.

15. Who normally issues pesticide applicator certifications under EPA-approved programs in the United States?

A. State, territorial, or tribal certifying authorities, with certain federal programs also operating approved plans.
B. Individual pesticide manufacturers for every commercial product.
C. Local customers who own the property being treated.
D. Insurance companies that provide liability coverage to pest-control firms.

16. Before mixing a pesticide concentrate, which action best prepares the applicator for an accidental exposure?

A. Rely on product odor to indicate when exposure becomes dangerous.
B. Wait until a spill occurs before locating the first-aid information.
C. Review the label first-aid directions and have appropriate decontamination supplies readily available.
D. Remove required PPE so contaminated items can be discarded more easily.

17. A technician removes chemical-resistant gloves after mixing pesticide. What should be done before eating lunch?

A. Eat first because the pesticide remained on the outside of the gloves.
B. Wipe the hands on a dry towel and wash only at the end of the day.
C. Wash hands thoroughly before handling food, beverages, tobacco, or the face.
D. Use hand sanitizer alone because water can spread pesticide residue.

18. Why should a tight-fitting respirator not be worn with facial hair that crosses the sealing surface?

A. Facial hair can prevent an adequate seal and allow contaminated air to leak around the facepiece.
B. Facial hair chemically destroys every respirator cartridge within minutes.
C. Hair causes the respirator to generate excessive oxygen inside the mask.
D. The pesticide label signal word changes when a beard is present.

19. A liquid pesticide splashes into an applicator’s eyes. What is the best immediate response?

A. Wait for eye irritation to develop before starting decontamination.

B. Begin prompt flushing as directed by the product first-aid instructions and obtain further help as appropriate.

C. Neutralize the pesticide by adding another household chemical to the eye.

D. Keep working if the pesticide has little odor and vision remains clear.

20. Which practice is safest when opening and pouring pesticide concentrate from a container?

A. Hold the container at eye level so the liquid level is easier to see.

B. Remove eye protection to prevent pesticide from collecting on the lenses.

C. Pour rapidly to shorten the time spent near the pesticide container.

D. Keep the opening below face level and pour carefully while wearing all required PPE.

21. A technician develops headache and nausea while applying pesticide in an enclosed utility room. What should the technician do first?

A. Finish the application so no mixture remains in the sprayer.

B. Increase the application rate so the service can be completed faster.

C. Stop the task, leave the exposure area safely, and follow the product’s emergency and first-aid directions.

D. Assume the symptoms are unrelated unless the pesticide has a strong odor.

22. A technician places pesticide-soiled coveralls in the same laundry bag as family clothing. What is the primary concern with this practice?

A. The coveralls will permanently disable the washing machine spin cycle.

B. Pesticide residues may transfer to other fabrics and expose people who did not handle the pesticide.

C. Family clothing will chemically neutralize the pesticide on the coveralls.

D. The pesticide will automatically become a restricted use product during laundering.

23. Spray flow suddenly drops and a technician suspects debris in the nozzle. What should happen before the technician touches or removes the tip?

A. Raise pressure briefly to force the debris out while spraying.
B. Blow backward through the tip using the mouth.
C. Stop the sprayer and relieve system pressure before cleaning with a suitable tool.
D. Strike the tip against the tank while the hose remains pressurized.

24. A label requires chemical-resistant gloves for mixing and loading. Which choice is appropriate?

A. Wear thin cotton gloves because they absorb splashes before skin contact.
B. Use any glove material as long as two pairs are worn together.
C. Skip gloves when measuring less than one ounce of concentrate.
D. Wear gloves made of a material that satisfies the label requirement and inspect them before use.

25. Which pesticide-handling task most directly creates a need for front-of-body splash protection such as a label-required chemical-resistant apron?

A. Reading a closed container label before the workday begins.
B. Inspecting an empty monitoring trap in a dry room.
C. Measuring and pouring liquid concentrate during mixing and loading.
D. Recording a service note after all equipment has been cleaned.

26. What is the main safety reason pesticide containers should be secured upright during transport?

A. Upright transport changes restricted use pesticides into general use products.
B. Securing containers reduces tipping, leakage, breakage, and contamination during vehicle movement.
C. A horizontal container always causes the active ingredient to decompose.
D. The EPA registration number is invalid whenever a container is laid on its side.

27. After a small pesticide spill is contained with absorbent material, how should the contaminated absorbent be handled?

A. Wash it into a storm drain with enough water to dilute the pesticide.
B. Leave it exposed outdoors until rainfall removes the remaining residue.
C. Place it immediately with customer food waste regardless of label directions.
D. Manage it according to the product labeling, spill procedures, and applicable disposal requirements.

28. Which statement about pesticide odor is most accurate for safety decisions?

A. Odor is not a reliable measure of whether pesticide exposure is safe or unsafe.
B. No odor means the air is free of pesticide contamination.
C. A strong odor always proves a life-threatening exposure has occurred.
D. Odor can replace the label when choosing respiratory protection.

29. Why should food, beverages, and tobacco be kept away from pesticide mixing and storage areas?

A. They chemically convert pesticide concentrate into a more volatile formulation.
B. They make chemical-resistant PPE lose its protective properties immediately.
C. They cause pesticide labels to become legally unenforceable during storage.
D. They can become contaminated and create an ingestion route for pesticide exposure.

30. A pesticide label says not to induce vomiting unless told to do so by medical personnel. What should an applicator do after a suspected ingestion?

A. Induce vomiting immediately because removing pesticide is always safest.
B. Give food or milk regardless of the product’s first-aid instructions.
C. Follow the label first-aid directions and obtain appropriate medical or poison-control guidance.
D. Wait for severe symptoms before consulting the labeling or seeking help.

31. A technician is treating a building perimeter beside a storm drain. Which practice best reduces environmental contamination?

A. Apply directly over the drain so excess mixture leaves the property.
B. Keep the application out of the drain and prevent spray or runoff from reaching it.
C. Increase the rate near the drain because water will dilute the pesticide.
D. Rinse any visible residue into the drain immediately after treatment.

32. Which description best matches spray drift during a pesticide application?

A. Airborne movement of pesticide droplets or dust away from the intended application area.
B. Downward movement of dissolved pesticide through soil as water percolates below the treated zone.
C. Surface movement of pesticide in flowing water across soil, pavement, or other treated surfaces.
D. Chemical or biological breakdown of a pesticide into different compounds after the application is completed.

33. Which change generally reduces spray drift risk when it is consistent with the pesticide label?

A. Raising the nozzle farther above the target to increase airborne travel.
B. Using a coarser droplet spectrum rather than producing very fine droplets.
C. Increasing wind exposure so droplets spread more uniformly.
D. Directing spray upward into open air before it reaches the target.

34. A hard rain is forecast shortly after an outdoor pesticide application. What should the applicator consider before treating?

A. Whether rain will automatically make every pesticide more effective.
B. Whether the customer prefers treatment before the storm regardless of runoff.
C. Whether rainfall could wash pesticide from the target into drains, soil, or surface water contrary to labeling.
D. Whether additional pesticide should be added to compensate for expected loss.

35. What is leaching?

A. Downward movement of a pesticide through soil with percolating water.
B. Airborne movement of spray droplets beyond the target.
C. Surface movement of pesticide in flowing rainwater.
D. Transfer of pesticide from one nozzle to another in a spray boom.

36. Granules are accidentally scattered onto a sidewalk next to a treated lawn. What is the best general response?

A. Wash the granules into the gutter with a hose.
B. Leave them because hard surfaces prevent environmental movement.
C. Crush them into powder so pedestrians will not notice them.
D. Remove the granules from the pavement and return them to the intended site if labeling allows.

37. Why is an air gap or approved backflow-prevention method important when filling pesticide application equipment from a water supply?

A. It helps prevent pesticide mixture from siphoning backward into the water source.
B. It increases pesticide concentration by removing excess water.
C. It eliminates the need to calibrate the sprayer before application.
D. It converts contaminated rinse water into potable water during filling.

38. Which situation presents the greatest immediate drift concern for an outdoor spray application?

A. Coarse droplets applied close to the target in acceptable wind conditions.
B. Fine droplets released into a steady wind blowing toward a sensitive neighboring site.
C. A closed bait station placed inside a protected utility room.
D. A crack-and-crevice gel bait applied beneath an indoor sink.

39. An exterior downspout discharges across the same pavement edge where a perimeter pesticide would be placed. Why should the technician account for that flow path?

A. Runoff from rain can carry pesticide from the treated edge toward drains or other nontarget areas.
B. Downspout water always increases pesticide toxicity after application.
C. The flow path determines which respirator cartridge must be worn indoors.
D. Rainwater changes the EPA registration number printed on the container.

40. Which action best protects pollinators when an outdoor insecticide label contains bee-protection restrictions?

A. Ignore the restrictions if honey bees are not visible during inspection.
B. Double the rate so fewer repeat applications will be needed later.
C. Follow the label restrictions on timing, flowering plants, drift, and other pollinator precautions.
D. Spray flowering weeds first because bees are attracted to those plants.

41. Which formulation is supplied ready to apply without measuring concentrate into a separate spray tank?

A. A wettable powder concentrate.
B. A water-dispersible granule concentrate.
C. An emulsifiable concentrate requiring dilution.
D. A ready-to-use formulation.

42. A spray tank containing a particle suspension sits without agitation for an extended period. What problem is most likely before spraying resumes?

A. The active ingredient automatically changes to a different pesticide.
B. Suspended solids may settle, producing a nonuniform mixture until properly re-agitated.
C. The water becomes a fumigant and escapes from the tank as gas.
D. The product becomes legally exempt from its labeled application rate.

43. What is a common advantage of granule formulations for certain outdoor applications?

A. They always provide immediate knockdown faster than every liquid formulation.
B. They can be legally applied at any rate because particles are premeasured.
C. They produce little spray drift because the pesticide is carried on larger solid particles.
D. They require no consideration of runoff, pets, wildlife, or label directions.

44. Which statement best describes an emulsifiable concentrate after it is mixed with water?

A. The formulation forms an emulsion in which pesticide-containing droplets are dispersed through the water.
B. The active ingredient becomes a dry dust that floats above the tank.
C. Every ingredient dissolves completely to form a true molecular solution.
D. The concentrate becomes a solid bait that must be placed in stations.

45. Why can dust formulations create a greater inhalation and drift concern than many coarse granular products?

A. Dust particles are always more acutely toxic than the same active ingredient in other formulations.
B. Their very fine particles can become airborne and move away from the placement site.
C. Dusts cannot adhere to any treated surface after they are applied.
D. Every dust formulation is legally classified as a fumigant.

46. A gel bait is placed beside a crack, then a strong repellent spray is applied directly over the bait. Why can this reduce bait performance?

A. Repellent contamination may discourage target pests from approaching or feeding on the bait.
B. Repellent spray always increases the nutritional value of the bait.
C. The bait becomes a fumigant whenever another insecticide touches it.
D. Gel bait only works when diluted into a broadcast spray tank.

47. What distinguishes a true solution from a suspension in a pesticide spray mixture?

A. A true solution always contains visible solid particles at the bottom.
B. A suspension cannot contain water as its carrier under any circumstance.
C. A solution is defined only by having a stronger pesticide concentration.
D. In a true solution the dissolved material does not settle out merely from standing.

48. Why are water-dispersible granules often considered easier to handle than loose wettable powders before mixing?

A. They never require agitation after entering the spray tank.
B. They can be applied to any site before the granules disperse.
C. The granulated form generally creates less airborne dust during measuring and handling.
D. They eliminate all need for chemical-resistant PPE during mixing.

49. What is a key hazard characteristic of fumigants?

A. They remain permanently fixed where a granule first contacts the soil.
B. They form gases or vapors capable of moving through enclosed or treated spaces.
C. They cannot enter the body by inhalation under any condition.
D. They are harmless unless mixed with an emulsifiable concentrate.

50. Why should an applicator verify physical compatibility before combining products in a tank when the labeling permits tank mixing?

A. Compatible products always become legally registered as a new pesticide mixture.
B. Any visible separation proves the active ingredients have become nontoxic.
C. Physical compatibility means the combined rate may exceed both product labels.
D. Incompatible mixtures can separate, form precipitates, clog equipment, or produce uneven application.

51. A spray nozzle begins producing an uneven fan pattern even though pressure is stable. What should the applicator check first?

A. Inspect the nozzle and strainer for wear, damage, or partial blockage.
B. Increase pesticide concentration until the pattern appears darker.
C. Ignore the pattern if the total tank volume is correct.
D. Walk faster so the irregular pattern is spread across more area.

52. Why should worn nozzles be replaced rather than calibrated indefinitely?

A. Nozzle wear lowers pesticide toxicity until the product is ineffective.
B. A worn nozzle automatically violates every label even when not used.
C. Wear can increase flow and distort spray distribution, making the intended rate and coverage unreliable.
D. Replacing a nozzle removes the need to measure sprayer output afterward.

53. A rectangular storage room is 24 feet long and 18 feet wide. What is its floor area?

A. 42 square feet.
B. 432 square feet.
C. 216 square feet.
D. 864 square feet.

54. A sprayer is calibrated to apply 0.75 gallon per 1,000 square feet. How much spray mixture is needed for 8,000 square feet?

A. 6 gallons.
B. 4 gallons.
C. 8 gallons.
D. 10.67 gallons.

55. A label calls for 3 fluid ounces of concentrate per 2,000 square feet. How much concentrate is required to treat 6,000 square feet at that rate?

A. 3 fluid ounces.
B. 6 fluid ounces.
C. 9 fluid ounces.
D. 12 fluid ounces.

56. A nozzle discharges 0.4 gallon per minute. How much liquid will it discharge in 5 minutes at the same setting?

A. 0.8 gallon.
B. 1.6 gallons.
C. 5.4 gallons.
D. 2 gallons.

57. A 4-gallon backpack sprayer covers 4,000 square feet at its calibrated setting. How many gallons are required to cover 15,000 square feet at the same rate?

A. 15 gallons.
B. 12 gallons.
C. 16 gallons.
D. 19 gallons.

58. A 5-gallon sprayer tank is one-quarter full. Approximately how many gallons of spray mixture are in the tank?

A. 0.5 gallon.
B. 2 gallons.
C. 3.75 gallons.
D. 1.25 gallons.

59. A technician treats 2,500 square feet using 2 gallons of finished spray. What was the application volume per 1,000 square feet?

A. 0.5 gallon per 1,000 square feet.
B. 0.8 gallon per 1,000 square feet.
C. 1.25 gallons per 1,000 square feet.
D. 2.5 gallons per 1,000 square feet.

60. A treatment strip is 25 feet long and 40 feet wide. At 1 gallon per 1,000 square feet, how much finished spray is required?

A. 0.65 gallon.
B. 1.5 gallons.
C. 1 gallon.
D. 2 gallons.

61. A liquid formulation contains 10% active ingredient by weight. If 20 ounces of product are used, how many ounces of active ingredient are represented?

A. 1 ounce.
B. 10 ounces.
C. 18 ounces.
D. 2 ounces.

62. A sprayer delivers 3 gallons over 6,000 square feet. At the same calibration, how many gallons will be needed for 14,000 square feet?

A. 5 gallons.
B. 8 gallons.
C. 7 gallons.
D. 9 gallons.

63. If all other factors remain constant, what generally happens to application rate per unit area when a walking applicator moves substantially slower?

A. More spray is deposited per unit area because the nozzle spends more time over the same ground.
B. Less spray is deposited because slower movement always lowers nozzle flow.
C. Application rate remains identical regardless of travel speed.
D. The pesticide concentration in the tank automatically decreases with slower travel.

64. What is the main purpose of calibrating a backpack or hand sprayer?

A. To increase pesticide toxicity before the product reaches the pest.
B. To determine the actual output so the intended amount is delivered over a known area or target.
C. To determine whether a pesticide is federally registered for a use site.
D. To eliminate the need to inspect nozzles and hoses before each service.

65. A hose fitting begins leaking pesticide mixture during application. What is the best response?

A. Stop the application safely, relieve pressure, and repair the leak before continuing.
B. Wrap the fitting while the system remains pressurized and keep spraying.
C. Increase pump pressure so mixture passes the leak more quickly.
D. Ignore the leak if the total tank volume is small.

66. During an inspection, a technician sees several ants but cannot identify the species. What is the best next step before selecting a treatment?

A. Apply the strongest available insecticide to every baseboard immediately.
B. Assume all indoor ants have identical nesting and feeding behavior.
C. Collect or observe enough evidence to identify the ant and determine where it is nesting or traveling.
D. Treat only the visible workers without investigating their trail.

67. What is the primary purpose of pest monitoring in an IPM program after control measures are applied?

A. To guarantee that no pest can ever enter the building again.
B. To determine whether pest activity declined and whether additional action or correction is needed.
C. To replace inspection records with the technician’s memory.
D. To justify repeating pesticide applications on a fixed calendar regardless of evidence.

68. Which action is an example of exclusion rather than pesticide application?

A. Applying residual insecticide along a baseboard.
B. Placing gel bait inside a cabinet hinge area.
C. Treating a rodent burrow with a labeled pesticide.
D. Sealing a pipe penetration that cockroaches or rodents can use to move between rooms.

69. A restaurant has repeated German cockroach activity around a leaking dishwashing area. Which nonchemical correction is most directly relevant?

A. Repair the leak and reduce persistent moisture around the harborage.
B. Increase outdoor lighting near the front entrance.
C. Remove window screens from dry storage rooms.
D. Store cardboard boxes closer to the wet wall.

70. Why is sanitation an important component of many cockroach and rodent IPM programs?

A. Sanitation makes pest identification unnecessary before treatment.
B. Cleaning alone guarantees elimination of every established infestation.
C. Removing accessible food and debris reduces resources that sustain pests and compete with control measures.
D. Food removal causes pesticide residues to become more toxic on contact.

71. What is a treatment threshold in pest management?

A. The exact pesticide dose that kills every individual pest.
B. The minimum number of technicians required on a service route.
C. The temperature at which every insect species stops reproducing.
D. A pest level or condition at which management action is justified under the program’s objectives.

72. Why should a technician document where monitoring devices are placed?

A. So pesticide labels no longer need to be reviewed during later visits.
B. So future readings can be compared consistently and activity can be mapped to specific locations.
C. So every device can be moved randomly at each service without losing data.
D. So pest identification can be skipped when trap counts increase.

73. Cockroach bait remains untouched at a food-service account, while inspection finds open syrup containers and grease deposits next to active harborages. Which correction is most useful?

A. Clean competing food residues and secure food while keeping appropriate bait available near activity.
B. Cover the bait with repellent aerosol so cockroaches remain nearby.
C. Remove all bait and monitors until the next scheduled visit.
D. Add water to the gel bait to make it spread over a larger area.

74. What is one important reason to rotate insecticides with different modes of action when resistance management guidance calls for it?

A. It guarantees every pesticide will remain effective forever.
B. It allows the applicator to exceed the labeled rate on alternating visits.
C. It eliminates the need for sanitation, exclusion, and monitoring.
D. It can reduce repeated selection pressure favoring pests resistant to a single mode of action.

75. Which inspection finding most strongly suggests a need to investigate a pest entry route?

A. Repeated pest activity concentrated beside an exterior door gap or utility penetration.
B. A clean interior wall with no pest evidence.
C. A sealed pipe chase with no openings or droppings.
D. An unused monitor that has remained empty for months.

76. Why is positive pest identification important before choosing a control tactic?

A. Every pesticide label is valid for every arthropod once the genus is unknown.
B. Different species can have different biology, harborages, food preferences, and effective control methods.
C. Incorrect identification increases pesticide potency against the target.
D. All structural pests respond identically to sanitation and exclusion.

77. A customer reports one mouse sighting after several weeks with no monitor activity. What is the best IPM response?

A. Inspect for fresh evidence, entry points, and monitor placement before deciding whether control tactics need adjustment.
B. Immediately broadcast rodenticide throughout every occupied room.
C. Assume the sighting proves a large infestation without further evidence.
D. Remove all traps because the monitors did not previously catch a mouse.

78. What does follow-up inspection contribute after a structural pest treatment?

A. It makes the original pest identification irrelevant.
B. It guarantees that every pesticide residue remains active indefinitely.
C. It replaces customer sanitation or exclusion responsibilities permanently.
D. It verifies results, detects surviving or new activity, and identifies conditions that still support pests.

79. Which statement best describes the role of pesticides in IPM?

A. They should always be applied on a fixed schedule regardless of pest evidence.

B. They are one tool that can be targeted and combined with nonchemical tactics when evidence supports their use.

C. They replace the need for identification whenever pests are difficult to find.

D. They are incompatible with sanitation, exclusion, trapping, and monitoring.

80. A technician finds many stored cardboard boxes touching walls in a cockroach-infested stockroom. Why should this condition be addressed?

A. Cardboard permanently repels cockroaches away from food and water.

B. Boxes eliminate the need to inspect wall-floor junctions.

C. Cardboard and clutter can provide harborages and make inspection, cleaning, and targeted treatment more difficult.

D. Clutter causes all pesticide residues to become chemically inactive.

81. Which finding is most characteristic of German cockroach activity in a commercial kitchen?

A. Small cockroaches and pepper-like fecal spotting concentrated near warm, moist food-preparation equipment.

B. Large soil mounds appearing along an exterior foundation after rain.

C. Round exit holes with coarse sawdust beneath exposed roof rafters.

D. Mud tubes extending from soil across a concrete foundation wall.

82. Why are gel baits often placed in small amounts near German cockroach harborages rather than spread across open floors?

A. Open-floor broadcast is required because cockroaches never enter cracks.

B. Close placement increases the chance cockroaches encounter bait while keeping it in protected, targeted locations.

C. Baits work only after they dry into a continuous surface film.

D. Placing bait near harborages prevents cockroaches from feeding on it.

83. A line of ants is entering through a window-frame gap and traveling to a sugary spill. What combination best addresses the immediate IPM problem?

A. Spray only the visible workers and leave the spill as monitoring bait.
B. Seal the gap immediately without identifying or following the active trail.
C. Move the sugary spill closer to the gap so ants remain in one place.
D. Clean the food source, identify the ant, trace the trail, and correct the entry gap when practical.

84. Which termite evidence most strongly suggests subterranean termites are moving from soil toward structural wood?

A. Loose pepper-like spotting around kitchen cabinet hinges.
B. Silken webbing and cast skins inside a food package.
C. Earthen shelter tubes crossing a foundation or other exposed surface.
D. A line of small ants feeding on a sweet spill.

85. What is a common inspection priority when bed bugs are suspected in a sleeping room?

A. Only exterior roof gutters because bed bugs normally breed in standing rainwater.
B. Only floor drains because bed bugs require aquatic larvae.
C. Mattress seams, bed-frame joints, headboard areas, and nearby cracks where bugs can hide close to hosts.
D. Only pantry shelves because bed bugs feed mainly on stored grain.

86. Which sign is most useful for distinguishing bed bug activity from a mosquito problem inside a bedroom?

A. The presence of itchy bites alone without any other evidence.
B. Live bed bugs, cast skins, eggs, or dark fecal spotting in harborages near the bed.
C. A porch light that attracts flying insects outside the window.

D. Standing water in a birdbath located several houses away.

87. Why is vacuuming useful as part of some bed bug management programs?

A. It creates a pesticide residue that kills hidden bed bugs for months.
B. It guarantees removal of every insect hidden inside walls and furniture.
C. It makes follow-up inspection unnecessary after the first service.
D. It can physically remove accessible bugs, eggs, cast skins, and debris from harborages before other measures.

88. A mouse can enter a building through a small gap beneath a loading door. Which long-term correction is most appropriate?

A. Repair the door gap with durable rodent-resistant exclusion while continuing monitoring and control.
B. Place food outside the gap so mice remain outdoors.
C. Leave the gap open so trapped mice can exit after feeding.
D. Apply insecticide to the threshold because rodents avoid insect residues.

89. Which evidence most strongly supports active rodent travel along a wall?

A. Fresh droppings, rub marks, tracks, or repeated trap captures along the same protected route.
B. A single dead flying insect on a windowsill.
C. Dry termite wings beneath an exterior porch light.
D. One silverfish found in a bathroom sink.

90. Why are snap traps for mice commonly placed with the trigger end near a wall when the runway is known?

A. Mice can only see trap triggers when they point away from walls.
B. Wall placement chemically increases the attractiveness of the trap.
C. Mice tend to travel along edges, so the trigger is positioned where the animal is likely to encounter it.

D. The trap becomes a pesticide only when its trigger touches the wall.

91. Which condition most directly supports drain fly development?

A. Dry, clean stainless steel shelves in a ventilated storeroom.
B. Sealed wall voids with no moisture or organic material.
C. Freshly painted exterior siding exposed to full sun.
D. Moist organic film accumulating inside drains or other wet plumbing surfaces.

92. A fruit fly problem persists around a beverage station even after adults are trapped. What should the inspection focus on next?

A. Dry structural lumber in an attic far from food service.
B. Fermenting organic residues, spills, drains, containers, or other moist breeding material near the station.
C. Clean exterior concrete with no organic accumulation.
D. Electrical panels that remain warm but completely dry and clean.

93. What evidence commonly indicates stored-product moth activity in a package of grain or cereal?

A. Silken webbing, larval material, or insects associated with the food product.
B. Mud tubes built from soil across the package surface.
C. Large grease rub marks running along the package edge.
D. Blood spotting concentrated on mattress seams beside the package.

94. Why should infested stored food usually be removed from the account as part of control?

A. Removing food causes every nearby pesticide residue to evaporate.
B. Infested food becomes harmless as soon as the package is closed.
C. Keeping the product provides sanitation benefits by concentrating pests.

D. The product can contain developing insects and continue producing adults even after nearby surfaces are treated.

95. Which building condition most favors silverfish activity?

A. Hot, dry exposed pavement with no shelter.
B. Deep standing water required for aquatic larvae.
C. Humid, protected areas with access to starchy or cellulose-based materials.
D. Fresh concrete exposed to direct sunlight and constant airflow.

96. Why can carpenter ant activity be associated with moisture-damaged wood even though the ants do not eat wood?

A. The ants digest cellulose as their only food source.
B. Softened or damaged wood can be easier to excavate for nesting galleries.
C. Moist wood converts carpenter ants into subterranean termites.
D. Water makes all ant baits ineffective regardless of formulation.

97. Which finding would most strongly suggest carpenter bee activity in exposed wood?

A. Fine pepper-like fecal spotting inside kitchen cabinet hinges.
B. Mud shelter tubes rising from soil onto a foundation.
C. Round entrance holes with tunneling in wood and coarse sawdust-like material nearby.
D. Silken webbing binding together cereal inside a pantry box.

98. Why are fleas often difficult to eliminate with a single treatment aimed only at adult fleas on a pet?

A. Eggs, larvae, and pupae may remain in the environment and continue developing after adults are removed.
B. Fleas reproduce only in standing water that cannot be treated.
C. All flea life stages live permanently on the host animal.

D. Adult fleas never feed on blood and therefore avoid hosts.

99. A customer sees winged insects indoors near a window. What is the best first step before deciding they are termite swarmers?

A. Apply termiticide immediately because every winged indoor insect is a termite.
B. Discard the insects and identify the pest only from the customer's bite history.
C. Assume they are ants because termites never appear near windows.
D. Collect or closely examine specimens for distinguishing body, antenna, wing, and waist characteristics.

100. What is the most appropriate overall strategy when structural pest activity is repeatedly associated with food, moisture, and entry gaps?

A. Increase pesticide quantity while leaving all contributing conditions unchanged.
B. Combine targeted pest control with sanitation, moisture correction, exclusion, and follow-up monitoring.
C. Treat only visible pests and stop service as soon as activity temporarily drops.
D. Ignore building conditions because pesticides are the only effective structural control tool.

Practice Exam 4: Answer Key and Explanations

1. C — The pesticide labeling controls the legal use rate. A company handout, customer request, or personal judgment cannot authorize application above a labeled maximum. Using excess product may also increase residues, exposure, and environmental loading without improving control. The applicator should therefore rely on the applicable labeling and certification rules, not custom or convenience.

2. B — EPA explicitly includes warehouses and grain elevators within the industrial, institutional, structural, and health-related commercial category. Agricultural plant, aquatic, and right-of-way categories cover different sites and purposes, even though insects or pesticides may also be involved in those settings. The applicator should therefore rely on the applicable labeling and certification rules, not custom or convenience.

3. D — EPA uses directive wording such as "do not," "must," and similar imperative language for mandatory labeling statements. A prohibition is therefore enforceable, not a suggestion. Wiping

afterward, certification status, or customer permission does not convert a prohibited application into an allowed one. The applicator should therefore rely on the applicable labeling and certification rules, not custom or convenience.

4. A — Federal law and regulations require certification for people who apply or supervise the use of restricted use pesticides. Other people may have separate responsibilities, but occupancy, inspection alone, or product sales discussion does not by itself create the federal RUP applicator-certification duty. The applicator should therefore rely on the applicable labeling and certification rules, not custom or convenience.

5. B — EPA's revised certification standards establish a federal minimum age of eighteen for people seeking applicator certification. A limited family-farm exception concerns certain noncertified applicators under supervision, not the general age for certification. State or tribal programs may still impose additional requirements. The applicator should therefore rely on the applicable labeling and certification rules, not custom or convenience.

6. D — EPA establishes federal minimum standards, while states, territories, and tribes administer approved certification programs and may impose additional requirements. Applicators therefore must satisfy the rules that apply in their jurisdiction as well as pesticide labeling and federal law. The applicator should therefore rely on the applicable labeling and certification rules, not custom or convenience.

7. C — Restricted use classification limits who may use the product. EPA allows use by certified applicators and, when requirements are met, by noncertified applicators under direct supervision. Location, customer absence, or dilution does not remove the product's restricted-use status. The applicator should therefore rely on the applicable labeling and certification rules, not custom or convenience.

8. A — Finding the same pest does not authorize a new treatment site or method. If the product is labeled only for outdoor use, customer permission, a reduced rate, or an inaccessible void does not create an indoor use. The technician must select a product whose labeling permits the intended application. That preserves lawful use.

9. D — EPA labeling guidance requires registered pesticide products to bear the general misuse statement explaining that use inconsistent with labeling violates federal law. That statement reinforces why the applicator must follow approved sites, methods, rates, precautions, and restrictions rather than improvising new uses. The applicator should therefore rely on the applicable labeling and certification rules, not custom or convenience.

10. C — EPA distinguishes private applicators mainly by pesticide use for production of an agricultural commodity on qualifying owned or rented property. Applicators who do not meet that private-applicator description are commercial applicators for federal certification purposes, although jurisdiction-specific licensing categories may add detail. The applicator should therefore rely on the applicable labeling and certification rules, not custom or convenience.

11. B — Federal core competency standards include label comprehension, safety, pesticides in the environment, pest identification and management, formulations, equipment and application techniques, and laws and regulations. Payroll, leasing, and marketing may matter to a business but are not listed core pesticide-use competencies. The applicator should therefore rely on the applicable labeling and certification rules, not custom or convenience.

12. A — EPA's revised certification rule establishes a maximum recertification interval of five years for commercial and private applicators. Individual programs determine how recertification is accomplished within applicable requirements, so a jurisdiction can require activity sooner even though the federal framework sets the outer interval. The applicator should therefore rely on the applicable labeling and certification rules, not custom or convenience.

13. B — EPA's revised certification standards specifically identify fumigation and aerial application as methods requiring specialized certifications. Crack-and-crevice work, baiting, trapping, wiping, and vacuuming may require training or category competence, but they are not the two specialized methods named in that federal change. The applicator should therefore rely on the applicable labeling and certification rules, not custom or convenience.

14. D — Pesticide registration is site-specific. A listed pest does not automatically authorize application at every place where that pest occurs, and a lower dose or temporary vacancy does not add an unlisted site. The applicator must stay within the sites and methods authorized by labeling. The applicator should therefore rely on the applicable labeling and certification rules, not custom or convenience.

15. A — EPA sets federal standards, but pesticide applicator certifications are generally issued through approved state, territorial, or tribal programs, with certain federal agency programs also recognized. Manufacturers, customers, and insurers do not substitute for the legally authorized certifying authority. The applicator should therefore rely on the applicable labeling and certification rules, not custom or convenience.

16. C — Preparing before handling concentrate reduces delay if a splash, spill, or other exposure occurs. First-aid directions are product-specific, and decontamination supplies should be accessible before work starts. Odor is not a reliable exposure gauge, and removing required PPE increases risk. The safer choice prevents exposure before it occurs instead of depending on odor, symptoms, or cleanup afterward.

17. C — Gloves reduce exposure but do not guarantee that hands remain uncontaminated during removal, leaks, or incidental contact. Washing before eating or touching the face helps prevent ingestion and skin transfer. A towel or sanitizer alone is not a universal substitute for proper washing after pesticide handling. That reduces exposure risk.

18. A — A tight-fitting respirator depends on a continuous seal against the wearer's skin. Hair under the sealing surface can create leakage paths that bypass filters or cartridges. The concern is facepiece fit and inward leakage, not cartridge chemistry, oxygen production, or any change in pesticide classification. That reduces exposure risk. Prevention comes first.

19. B — Eye tissue is sensitive, and reducing pesticide contact time is important. Product labeling provides the specific first-aid procedure, so decontamination should begin promptly rather than waiting for symptoms. Adding unapproved chemicals can worsen injury, and odor or clear vision does not establish safety. The safer choice prevents exposure before it occurs instead of depending on odor, symptoms, or cleanup afterward.

20. D — Keeping concentrate below the face reduces the chance that a splash reaches the eyes or mouth. Careful handling and required PPE add layers of protection. Raising the container, removing protection, or rushing the pour increases the likelihood or consequence of an unexpected splash. The safer choice prevents exposure before it occurs instead of depending on odor, symptoms, or cleanup afterward.

21. C — Possible pesticide illness should be treated as a potential exposure event. Stopping the task and reaching uncontaminated air can prevent additional exposure while label first-aid and emergency procedures guide next steps. Odor strength and the desire to finish the job are not safety tests. Required PPE, hygiene, decontamination, and first-aid directions should be treated as parts of one exposure-control system.

22. B — Contaminated garments can transfer pesticide residue to other fabrics during storage, handling, or washing. That creates a preventable secondary exposure pathway for household members. Separate handling and laundering reduce cross-contamination; the concern is residue transfer, not damage to the machine or a change in pesticide classification. That reduces exposure risk.

23. A — A partially blocked nozzle can release pesticide unexpectedly when loosened. Relieving pressure before removal controls that hazard, and a suitable brush or tool avoids mouth contact. Increasing pressure, blowing through the nozzle, or striking pressurized equipment can create ingestion, inhalation, splash, or injection exposure. Required PPE, hygiene, decontamination, and first-aid directions should be treated as parts of one exposure-control system.

24. D — Chemical resistance depends on glove material and the pesticide formulation, so the label requirement matters. Gloves should also be checked for holes, cracking, swelling, or contamination. Cotton, arbitrary layering, or a small quantity of concentrate does not replace the specified protection. The safer choice prevents exposure before it occurs instead of depending on odor, symptoms, or cleanup afterward.

25. C — Mixing and loading liquid concentrate places the worker close to an open container and creates a meaningful splash pathway to the torso and legs. A chemical-resistant apron can provide added protection when the label requires it. Reading, monitoring, and paperwork do not present the same concentrate-handling exposure. That reduces exposure risk.

26. B — Service vehicles stop, turn, and encounter bumps that can shift unsecured containers. Upright, secured transport reduces the chance of leaks and spills that could expose workers or contaminate the vehicle. Container orientation does not change legal classification, registration status, or automatically alter the active ingredient. That reduces exposure risk. Prevention comes first.

27. D — Absorbent used on a pesticide spill becomes contaminated material. Its handling should follow product-specific labeling, company spill procedures, and applicable disposal rules. Washing it to a drain, leaving it for weather, or mixing it casually with ordinary waste can create additional exposure and environmental contamination. That reduces exposure risk. Prevention comes first.

28. A — People can smell some chemicals at very low concentrations and may fail to smell others at important concentrations. Sensory perception therefore cannot establish exposure level or required PPE. Safety decisions should rely on labeling, hazard information, ventilation, equipment, and the specific task rather than smell alone. That reduces exposure risk.

29. D — Pesticide residues can contaminate items that later contact the mouth. Keeping food, drinks, and tobacco out of pesticide work areas prevents an avoidable ingestion pathway and reduces cross-contamination. The concern is exposure, not a chemical change to the formulation, PPE, or the legal status of labeling. That reduces exposure risk.

30. C — First-aid instructions vary with pesticide chemistry, and inducing vomiting can sometimes increase harm. The applicator should follow the product-specific directions and obtain professional guidance rather than using a universal home remedy. Waiting for severe symptoms can delay appropriate care after a meaningful exposure. The safer choice prevents exposure before it occurs instead of depending on odor, symptoms, or cleanup afterward.

31. B — Storm drains can carry contaminants rapidly to surface waters or other sensitive areas. The application should be kept on the intended treatment site and away from drainage pathways. Dilution does not make intentional discharge acceptable, and rinsing residue into the drain worsens the off-target movement. That limits off-target movement. Sensitive sites stay protected.

32. A — EPA describes spray drift as airborne movement of pesticide droplets or dust away from the intended application area at or shortly after application. Leaching involves downward movement through soil, runoff travels over surfaces with water, and degradation is chemical or biological breakdown of the pesticide itself. That limits off-target movement.

33. B — Very fine droplets remain airborne longer and are more easily carried off target. Coarser droplets can reduce drift potential when the label and application needs allow them. Greater release height, wind exposure, and upward spraying generally increase the opportunity for airborne movement. Drift, runoff, leaching, and accidental discharge are different pathways, so the prevention method should match the pathway.

34. C — Rain can move pesticide away from the treatment site in runoff and may also reduce efficacy if the product needs time to dry or bind. The applicator should follow weather restrictions and evaluate drainage. Customer preference or adding extra pesticide does not override labeling or environmental protection. That limits off-target movement.

35. A — Leaching describes downward movement through the soil profile, often with water. It differs from spray drift, which is airborne movement, and runoff, which travels over the surface. Soil texture, organic matter, pesticide properties, and water movement can influence the potential for leaching. Drift,

runoff, leaching, and accidental discharge are different pathways, so the prevention method should match the pathway.

36. D — Granules on pavement can be tracked, contacted by people or animals, or carried by rain into storm drains. Removing them from the hard surface reduces those pathways. Hosing them away creates runoff, and crushing or leaving them does not correct the off-target placement. Drift, runoff, leaching, and accidental discharge are different pathways, so the prevention method should match the pathway.

37. A — Back-siphoning can contaminate a water source if a hose or fill line creates a connection between pesticide mixture and the supply. An air gap or appropriate backflow prevention interrupts that pathway. It does not change concentration, replace calibration, or make contaminated water safe to drink. That limits off-target movement. Sensitive sites stay protected.

38. B — Fine droplets are readily carried by wind, and a sensitive downwind site increases the consequence of off-target movement. Coarser droplets released near the target reduce airborne travel, while enclosed baits and indoor gel placements do not create the same spray-drift pathway. Good application practice keeps pesticide on the intended target and away from water, people, wildlife, and other nontarget sites.

39. D — A downspout can concentrate rainwater and move residues away from the intended perimeter band. Mapping that pathway helps the technician avoid placement that may be washed toward drains, surface water, or other sensitive locations. The concern is runoff movement, not toxicity, respirator selection, or registration numbering. That limits off-target movement.

40. C — Pollinator risk depends on pesticide toxicity, exposure, flowering plants, timing, and drift, not merely whether bees are visible at one moment. Label precautions are designed around those exposure pathways. Increasing the rate or treating blooms contrary to restrictions can increase risk rather than reduce it. That limits off-target movement. Sensitive sites stay protected.

41. D — Ready-to-use products are formulated for application without the user measuring a concentrated pesticide into a separate tank. Concentrated liquids, wettable powders, and water-dispersible granules commonly require mixing according to the label. Ready-to-use convenience does not eliminate PPE, site, rate, or other labeling requirements. Formulation affects mixing, agitation, exposure potential, application equipment, and how the active ingredient reaches the target.

42. B — Suspensions contain dispersed solid particles rather than material dissolved at the molecular level. When agitation stops, gravity can allow particles to settle and create uneven concentration through the tank. Proper re-agitation restores uniformity before application; standing does not change the active ingredient, legal rate, or formulation into a fumigant. Physical behavior matters.

43. C — Granules are larger solid particles and therefore do not create the same airborne droplet drift as a liquid spray. They still can move with runoff, be contacted or eaten by nontarget organisms, and must be applied at labeled rates. Formulation alone does not guarantee speed or unrestricted use. Physical behavior matters.

44. A — An emulsifiable concentrate contains pesticide and solvents with emulsifiers that allow an oil-like phase to disperse as small droplets in water. That mixture is an emulsion, not necessarily a true solution. It remains a liquid spray formulation rather than turning into dust or solid bait. The label still controls use.

45. B — Dusts contain very fine particles that can be suspended in air, increasing inhalation and off-target movement if handled or applied poorly. Toxicity depends on the product, not merely the formulation name. Dusts can remain in voids and on surfaces and are not the same as fumigants. Mixing behavior can differ.

46. A — Baits depend on pests encountering and accepting the placement. Contaminating bait or the immediate approach area with a strong repellent can reduce feeding and interfere with that behavior. The bait does not become a fumigant, gain nutritional value, or require conversion into a broadcast liquid application. Mixing behavior can differ.

47. D — In a true solution, dissolved molecules or ions remain uniformly distributed at the molecular level, so ordinary settling does not separate them. Suspensions contain dispersed solid particles that can settle. Carrier choice and concentration do not by themselves define whether a mixture is a solution or suspension. Physical behavior matters.

48. C — Water-dispersible granules break apart and disperse in water but are packaged as larger granules rather than loose fine powder. That form can reduce dust during handling. Once mixed, agitation may still be required, and all label-directed PPE, rates, sites, and application instructions remain applicable. Formulation affects mixing, agitation, exposure potential, application equipment, and how the active ingredient reaches the target.

49. B — Fumigants act in a gaseous or vapor phase, which allows them to penetrate spaces but also creates substantial inhalation and containment concerns. Their movement requires specialized knowledge and controls. They are not fixed particles, and their hazards do not depend on mixing with another formulation. The label still controls use.

50. D — Even when a tank mix is allowed, formulations can interact physically and form clumps, layers, gels, or precipitates that interfere with equipment and uniform delivery. A compatibility check addresses mixture behavior, not legal registration or rate changes. Each product’s labeling restrictions still apply to the combined use. Physical behavior matters.

51. A — An uneven pattern commonly points to a nozzle, tip, or strainer problem such as wear or obstruction. Concentration and walking speed do not repair the physical spray pattern. The component should be inspected, cleaned safely, or replaced before calibration and treatment continue. Small equipment changes can materially change application rate, so measurements should be made before treating the customer site.

52. C — A worn nozzle opening can enlarge or change shape, increasing flow and altering the pattern. Calibration may reveal the change, but excessive wear can make delivery inconsistent. Replacing the part restores predictable performance, after which output should still be measured before application.

Small equipment changes can materially change application rate, so measurements should be made before treating the customer site.

53. B — Area of a rectangle equals length multiplied by width. Multiplying 24 feet by 18 feet gives 432 square feet. The smaller answers result from adding dimensions or using only part of the product, while 864 doubles the correct area. Calibration replaces guesswork with measured output and should be repeated whenever speed, pressure, nozzle condition, or equipment configuration changes.

54. A — Eight thousand square feet contains eight 1,000-square-foot units. At 0.75 gallon for each unit, the required spray volume is 8 multiplied by 0.75, which equals 6 gallons. The other choices reflect incorrect multiplication or division of the calibrated rate. Calibration replaces guesswork with measured output and should be repeated whenever speed, pressure, nozzle condition, or equipment configuration changes.

55. C — Six thousand square feet contains three 2,000-square-foot treatment units. At 3 fluid ounces of concentrate for each unit, the required amount is 3 times 3, or 9 fluid ounces. The other choices represent using only one or two units or multiplying the rate by four. Measured output controls the rate.

56. D — Flow multiplied by time gives total volume when the discharge rate stays constant. A nozzle delivering 0.4 gallon each minute for 5 minutes releases 0.4 times 5, or 2 gallons. The other values do not correctly combine the given rate and duration. Small equipment changes can materially change application rate, so measurements should be made before treating the customer site.

57. A — The calibration is one gallon per 1,000 square feet because 4 gallons cover 4,000 square feet. Applying that same rate to 15,000 square feet requires 15 gallons. The other choices do not preserve the measured relationship between spray volume and treated area. Small equipment changes can materially change application rate, so measurements should be made before treating the customer site.

58. D — One-quarter of a 5-gallon tank is found by multiplying 5 by 0.25. The result is 1.25 gallons. Two gallons is forty percent of the tank, 3.75 gallons is three-quarters full, and 0.5 gallon is only one-tenth of the tank capacity. Calibration replaces guesswork with measured output and should be repeated whenever speed, pressure, nozzle condition, or equipment configuration changes.

59. B — Divide total spray volume by the number of 1,000-square-foot units treated. The area is 2.5 units, so 2 gallons divided by 2.5 equals 0.8 gallon per 1,000 square feet. The other choices reverse or incorrectly scale the measured relationship. Calibration replaces guesswork with measured output and should be repeated whenever speed, pressure, nozzle condition, or equipment configuration changes.

60. C — First calculate area: 25 feet times 40 feet equals 1,000 square feet. The calibrated rate is one gallon for each 1,000 square feet, so exactly 1 gallon is required. The distractors result from using the dimensions without completing the area calculation correctly. Small equipment changes can materially change application rate, so measurements should be made before treating the customer site.

61. D — Ten percent means one-tenth of the product weight is active ingredient. Multiplying 20 ounces by 0.10 gives 2 ounces of active ingredient. Ten ounces would represent fifty percent, while eighteen

ounces would represent ninety percent, so those choices do not match the stated concentration. Measured output controls the rate. Recheck before application.

62. C — The measured rate is 3 gallons divided by 6,000 square feet, or 0.5 gallon per 1,000 square feet. Fourteen thousand square feet contains fourteen such units, and 14 multiplied by 0.5 equals 7 gallons. The alternatives do not maintain the calibrated proportion. Small equipment changes can materially change application rate, so measurements should be made before treating the customer site.

63. A — Travel speed changes how long a given nozzle output is distributed over an area. Moving slower while flow stays constant deposits more volume per unit area; moving faster deposits less. Nozzle flow and tank concentration do not automatically change merely because the applicator changes walking speed. Measured output controls the rate.

64. B — Calibration connects measured equipment output with treated area, time, or target so the applicator can deliver the intended rate. It does not change product toxicity or registration and does not replace equipment inspection. Calibration should be repeated when operating conditions or components materially change. Measured output controls the rate. Recheck before application.

65. A — A leaking pressurized system can expose the applicator and deposit pesticide off target. Stopping, depressurizing, and repairing the problem controls the hazard at its source. Continuing under pressure, increasing pressure, or dismissing a small volume can turn a manageable defect into a larger incident. Measured output controls the rate. Recheck before application.

66. C — Different ant species can nest in very different locations and respond differently to baits, exclusion, moisture correction, or direct treatment. Identification and trail inspection therefore guide a more effective plan. Treating visible workers alone may reduce activity temporarily without affecting the colony or source. Evidence guides the tactic. Monitoring confirms the result.

67. B — Monitoring provides evidence about results. Traps, sightings, counts, damage, or other indicators can show whether the population is declining, stable, or increasing and whether contributing conditions remain. It supports decisions based on current pest pressure instead of routine treatment without evidence. Follow-up monitoring is essential because it shows whether the chosen tactic reduced the pest and whether contributing conditions remain.

68. D — Exclusion physically blocks pest access or movement by closing gaps, repairing screens, sealing penetrations, or improving building interfaces. Residual sprays, baits, and pesticide treatment of burrows are chemical controls. Exclusion can reduce reinvasion and often makes other tactics more effective and durable. Evidence guides the tactic. Monitoring confirms the result.

69. A — German cockroaches need water and commonly concentrate near warm, moist food-service equipment. Correcting the leak removes a resource that supports the infestation and can improve bait and sanitation results. Outdoor lighting, screen removal, and added cardboard do not address the key moisture condition and may add pest problems. Evidence guides the tactic.

70. C — Food debris, grease, spills, and clutter can support pests and compete with baits or other tactics. Sanitation reduces those resources and improves inspection access. It is rarely a universal stand-alone

cure for an established infestation, but it strengthens the overall IPM program and helps prevent rebound. Evidence guides the tactic.

71. D — A threshold links pest evidence to a management decision. Depending on the site, even one pest may be unacceptable, while other settings tolerate low activity before action. Thresholds are decision criteria, not pesticide doses, staffing rules, or universal biological temperatures. IPM uses inspection evidence to combine exclusion, sanitation, habitat correction, monitoring, and targeted control rather than routine pesticide use alone.

72. B — Consistent device locations make trend data more meaningful and help reveal activity centers, movement routes, and changes over time. Mapping also supports communication among technicians. Random movement without documentation breaks comparability, while monitoring data still must be interpreted with identification, inspection, and label-directed treatment decisions. Conditions must also be corrected.

73. C — Open food and grease can compete strongly with cockroach bait. Reducing those alternative resources makes the bait more likely to be encountered and consumed while improving sanitation overall. Repellent contamination, removing the monitoring system, or altering bait formulation can undermine the program rather than address the competing food source. Evidence guides the tactic.

74. D — Repeated exposure to the same mode of action can favor survivors with resistance traits, increasing their proportion in the population. Appropriate rotation can reduce that repeated selection pressure. It does not guarantee permanent susceptibility, authorize label violations, or replace nonchemical IPM tactics. Evidence guides the tactic. Monitoring confirms the result.

75. A — Activity repeatedly associated with a gap, door, or penetration suggests pests may be entering or moving through that building opening. Inspecting and correcting the route can reduce continued immigration. Locations with no evidence are lower priorities unless other information points to a hidden source. Evidence guides the tactic. Monitoring confirms the result.

76. B — Control decisions depend on what the organism is and how it lives. Species differences can change where to inspect, which bait to use, whether exclusion matters, and what life stage is vulnerable. Misidentification can waste treatment and delay correction of the true source. Evidence guides the tactic. Monitoring confirms the result.

77. A — A new sighting is useful evidence but should be investigated in context. Fresh droppings, gnawing, tracks, entry gaps, and monitor placement can reveal whether activity is isolated, newly introduced, or missed by the existing system. The response should be evidence-based rather than automatically escalating pesticide use. Evidence guides the tactic.

78. D — A treatment is not complete merely because pesticide was applied. Follow-up shows whether activity changed and whether food, water, access, or harborage conditions remain. That information guides retreatment, nonchemical corrections, or closure of the service issue and helps distinguish persistence from reinvasion. Evidence guides the tactic. Monitoring confirms the result.

79. B — IPM does not prohibit pesticides; it uses them as one component selected according to pest evidence, risk, biology, and site conditions. Targeted application can complement sanitation, exclusion, trapping, habitat correction, and monitoring. Routine treatment without evidence is not the defining IPM approach. Evidence guides the tactic. Monitoring confirms the result.

80. C — Corrugated cardboard, stacked materials, and tight voids can provide protected harborages and travel pathways while blocking inspection and sanitation access. Reducing unnecessary clutter improves visibility and removes shelter. The issue is physical habitat and access, not a chemical effect on pesticide residues. Evidence guides the tactic. Monitoring confirms the result.

81. A — German cockroaches commonly occupy warm, humid areas close to food and water, especially around cooking, refrigeration, dishwashing, and plumbing equipment. Small droppings and aggregations near those harborages support the diagnosis. Soil mounds, wood-boring evidence, and mud tubes point toward other pest groups. Recognizing characteristic evidence narrows the inspection and helps place controls where the pest actually lives or travels.

82. B — German cockroaches spend much of their time in cracks and protected harborages and forage along established routes. Small placements near those areas improve encounter probability and reduce unnecessary exposure on open surfaces. Bait effectiveness depends on access and palatability, not on forming a broadcast residue. Biology-based placement generally improves control while reducing unnecessary treatment of occupied building surfaces.

83. D — The spill provides food, the trail provides diagnostic information, and the gap may be an entry route. Combining sanitation, identification, trail tracing, and exclusion addresses both current activity and a contributing condition. Treating workers alone may not affect the colony, while preserving the food source sustains foraging. Biology-based placement generally improves control while reducing unnecessary treatment of occupied building surfaces.

84. C — Subterranean termites construct earthen shelter tubes that maintain humidity and protect workers as they move between soil and wood. Those tubes are strong evidence of termite activity or prior activity that warrants evaluation. Cockroach spotting, stored-product webbing, and ant trails indicate different pest groups. Biology-based placement generally improves control while reducing unnecessary treatment of occupied building surfaces.

85. C — Bed bugs tend to hide in protected cracks near places where people rest for extended periods. Mattress seams, frames, headboards, furniture joints, and nearby crevices are therefore high-value inspection sites. They do not have aquatic larvae and do not develop by feeding on stored grain. Biology-based placement generally improves control while reducing unnecessary treatment of occupied building surfaces.

86. B — Skin reactions alone are not specific enough to identify bed bugs because many conditions can cause similar marks. Finding characteristic insects, eggs, cast skins, or fecal spotting in likely harborages provides stronger evidence. Mosquito concerns are more closely tied to flying adults and larval water sources. Biology-based placement generally improves control while reducing unnecessary treatment of occupied building surfaces.

87. D — Vacuuming is a mechanical reduction tool that can remove exposed insects and debris and improve access for inspection or treatment. It has no residual pesticide activity and cannot reach every hidden harborage. Contents must also be handled carefully so captured bugs are not redistributed. Biology-based placement generally improves control while reducing unnecessary treatment of occupied building surfaces.

88. A — Rodent control is more durable when entry points are corrected with materials and repairs that resist gnawing and normal building wear. Monitoring and population control may still be needed for animals already inside. Feeding mice or relying on insecticide does not correct the structural access route. Biology-based placement generally improves control while reducing unnecessary treatment of occupied building surfaces.

89. A — Rodents frequently travel along edges and protected routes. Fresh droppings, greasy rub marks, tracks, gnawing, and repeated captures can identify active runways and guide trap or bait placement. An unrelated insect observation does not provide comparable evidence of rodent movement along that wall. Recognizing characteristic evidence narrows the inspection and helps place controls where the pest actually lives or travels.

90. C — House mice often use walls and objects as guides while traveling. Positioning a trap so the trigger intersects that route increases the chance of contact. The advantage is behavioral placement, not a chemical attraction or legal transformation of the trap into a pesticide. Recognizing characteristic evidence narrows the inspection and helps place controls where the pest actually lives or travels.

91. D — Drain fly larvae develop in moist organic material, often the film that builds inside drains, traps, or similar wet sites. Effective management therefore includes locating and removing that breeding material. Dry shelves, sealed dry voids, and sun-exposed siding do not provide the same larval habitat. Biology-based placement generally improves control while reducing unnecessary treatment of occupied building surfaces.

92. B — Trapping adults can reduce visible flies but does not eliminate a breeding source. Fruit flies develop in fermenting organic material associated with residues, containers, drains, and similar moist sites. Finding and removing that source interrupts reproduction and is more durable than trapping adults alone. Biology-based placement generally improves control while reducing unnecessary treatment of occupied building surfaces.

93. A — Stored-product moth larvae can produce silk that webs food particles together and may leave cast material or larvae inside packages. Those signs point toward an infestation originating in stored food. Mud tubes, rodent rub marks, and bed bug spotting are characteristic of unrelated structural pests. Biology-based placement generally improves control while reducing unnecessary treatment of occupied building surfaces.

94. D — Stored-product insects often develop inside the food itself, so an infested package can remain a continuing source of larvae and emerging adults. Removing or properly handling that source is central to control. Treating surrounding surfaces without addressing infested commodities can allow the

infestation to persist. Biology-based placement generally improves control while reducing unnecessary treatment of occupied building surfaces.

95. C — Silverfish favor protected locations with elevated humidity and feed on materials containing starches, paper, adhesives, or related substances. Moisture correction, sanitation, and harborage reduction can therefore matter. They do not have an aquatic larval stage and are not especially adapted to exposed, hot, dry surfaces. Biology-based placement generally improves control while reducing unnecessary treatment of occupied building surfaces.

96. B — Carpenter ants excavate wood to create nesting space but obtain food from other sources. Moisture-damaged or decayed wood may be easier to hollow out, making leaks and wet structural areas useful inspection clues. Their biology differs from termites, which actually consume cellulose-containing material. Recognizing characteristic evidence narrows the inspection and helps place controls where the pest actually lives or travels.

97. C — Carpenter bees excavate nesting tunnels in wood and often leave a relatively round entrance opening with coarse wood particles nearby. Cockroach fecal spotting, subterranean termite tubes, and stored-product insect webbing are distinct signs that should direct the inspection toward different pests. Recognizing characteristic evidence narrows the inspection and helps place controls where the pest actually lives or travels.

98. A — The flea life cycle includes off-host stages in carpets, bedding, cracks, or other protected areas. Removing adults from an animal does not automatically remove eggs, larvae, or pupae in the environment. Effective control often requires coordinated host management, environmental cleaning, monitoring, and appropriately labeled treatment. Biology-based placement generally improves control while reducing unnecessary treatment of occupied building surfaces.

99. D — Winged ants and termite swarmers can be confused by untrained observers, but their body shape, antennae, and wings provide useful distinguishing features. Positive identification should precede major treatment decisions. Location near a window alone does not prove either group because flying insects often move toward light. Biology-based placement generally improves control while reducing unnecessary treatment of occupied building surfaces.

100. B — Persistent infestations are often sustained by resources and access as well as the pest population itself. Combining targeted control with food removal, moisture repair, exclusion, and monitoring addresses multiple causes. Pesticide alone may reduce visible activity without preventing survival, reinvasion, or recurrence when supporting conditions remain. Biology-based placement generally improves control while reducing unnecessary treatment of occupied building surfaces.