

IPM CURRICULUM FOR PEST MANAGEMENT TECHNICIANS

LOW-RISK INTEGRATED PEST MANAGEMENT TRAINING

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INSTRUCTION UNITS IN THIS LESSON PLAN:

1. The IPM policy, what it does, what not to do, PMT role in policy compliance.
2. Low-risk pest management system.
3. Data collecting, recording and use.
4. Insect specimens.
5. Inspection process- what to look for and why.
- 6-13. Pest biology, behavior, and IPM methods.
- 14-15. Laws and regulations: labels, pesticide toxicology, exam, certificates.

Unit #	Objective of Performance	Importance	Learning Difficulty
1	Know the IPM policy, understand roles in the policy.	Important	Moderate
2	Pest management objectives – establish priorities and action thresholds.	Important	Moderate
3	Know why data is collected, how to record data, and how to use recorded data. Know what data is used by staff and what data is used by PMTs.	Very Important	Moderate
4	Be able to identify public health and structural inhabiting pest species, collect and display them as specimens.	Important	Moderate
5	Know why inspections are conducted, what to look for, and be able to interpret observations.	Very Important	Moderate
6-13	Perform effective solutions to key pest problems: ants, cockroaches, mice, rats, termites, wasps, weeds; and instruct staff in their responsibilities.	Very Important	Very Difficult
14-15	Know federal and state laws on pesticide use, understand labels, labeling and pesticide risks, pass an exam, certificates awarded.	Important	Moderate

KEY:

IMPORTANCE:

OBJECTIVE OF PERFORMANCE:

LEARNING DIFFICULTY:

Very important, important, not too important

Must know, be familiar, have knowledge, understand, perform, demonstrate, etc.

Difficult, Moderate, Easy, Moderate to Very Difficult

PEST MANAGEMENT TECHNICIAN LESSON PLAN

PREPARATION DATE: May 7, 2008

PREPARED BY: William E. Currie

UNIT OF INSTRUCTION: Low-risk IPM Policy Implementation

TITLE OF LESSON: Policy, roles, record keeping, insect specimens.

INSTRUCTIONAL OBJECTIVE: Know the low-risk IPM policy and PMT's role in implementation. Know what a pest is and why, and what their needs are. Be able to develop voucher specimens and develop an insect collection.

TIME ALLOTTED FOR LESSON: 3 hours
METHOD OF INSTRUCTION: Lecture, PPT, guided discussion, demonstration
INSTRUCTIONAL RESOURCES: Manual, PPT, slides, flip chart
A/V EQUIPMENT: Flip chart, PPT, slide projector, overhead projector, screen

GENERAL PLAN OF PRESENTATION: Introductions – our role – their charge. Why an IPM Policy? What it does, prohibited activities, their roles in implementation, how to get pest management help, expectations. What is a pest? Pest needs – pest entry into structures and how to keep them out. Pest management system, 8 steps. Record keeping. Develop voucher specimens and an insect collection.

INTRODUCTION: Names and roles of instructors, student introductions. Why are we here? Why an IPM policy? What's different? IPM defined – what to do – precautionary principle. Approved list of products, notification, posting, emergency approval, training. Don'ts: Licensed PMTs only apply pesticides, no ban, phase out, roles. Sanitation: No food, pest-proof food storage, eliminate clutter, observation and reporting. Teach others, expectations of PMTs.

EXPLANATION/APPLICATION/PRESENTATION:

What is a pest? Why are they considered pests? How important are they? Pests need air, water, food, shelter, temperature, light. We provide their needs because we design our shelters and landscapes to meet our needs (which are the same as theirs).

How do pests enter structures? Doors, windows, vents, pipes, cracks and crevices, deliveries, personnel, etc. How do we keep pests out? Close doors, install door sweeps, screens, caulk, repairs, etc. How can we encourage innovative approaches for preventing pests? Pest management system: roles of occupants, pest managers, decision makers. Pest management objectives: action thresholds, inspection and monitoring, habitat modification, exclusion, sanitation, clutter removal. Judicious use of low-risk pesticides from the approved list of products. Evaluation of results: keep records. How to develop voucher specimens and establish an insect collection.

CONCLUSIONS/SUMMARY: Low-risk pest management requires dedication and may be tedious and time-consuming when performed correctly. A thorough understanding of why such procedures are so important frequently imparts a degree of significance to even the most mundane task. Pests live where conditions favor them. Good pest management practices prevent pest presence by eliminating pest access to their needs.

HOMEWORK ASSIGNMENT:

1. Read Manual.
2. Describe your role in the Policy implementation.
3. List evidence and sighting of pests.
4. Start collecting voucher specimens and insects.

PEST MANAGEMENT TECHNICIAN LESSON PLAN UNIT ONE

COURSE DESCRIPTION: Low-Risk Integrated Pest Management Implementation
SUBJECT MATTER: Policy, Roles, How to Activate Pest Management Help
UNIT OF INSTRUCTION: Unit 1: Lecture, PPT or Slides – 40 minutes

INSTRUCTIONAL PROCEDURE:

No.	Instructional Sequence (Tasks)	Instruction Method (Performance)	Learning Difficulty
1	Policy, history, implementation	Lecture	Easy
2	What's different, IPM definition, do's, precautionary principle, approved product list, notification, posting, emergency approval, training	Lecture	Moderate
3	Don'ts, only licensed PMTs apply pesticides, remove harborage (clutter), no ban, phase out pesticides over time	Lecture	Difficult
4	Roles, sanitation, no food, pest-proof food storage, eliminate clutter, observation and reporting, teach others	Lecture	Moderate
5	Reportable conditions, pest sighting, pest evidence, droppings, gnawings, webbing, fecal focal points, scattered trash, etc.	Lecture, Display, Q&A	Difficult
6	Facilities Manager, point of contact, may examine situation, call to report, information directed to appropriate office	Lecture	Easy
7	Expectations, PMT responds, emergencies that day, rapid – others soon – thorough inspection and monitoring	Lecture, Demonstration (monitors, traps)	Easy
8	Low-risk pesticide application, follow-up, repair structural defects, prevent pest access	Lecture	Easy
9	Basics of IPM: exclusion, sanitation, habitat modification, inspection, monitoring, low-risk pesticides, records	Lecture	Moderate

INSTRUCTIONAL SEQUENCE: What comes first, chronological order
METHOD OF INSTRUCTION: Lecture, demonstration, performance, discussion

PEST MANAGEMENT TECHNICIAN LESSON PLAN UNIT TWO

COURSE DESCRIPTION: Low-risk Integrated Pest Management Implementation
 SUBJECT MATTER: Low-risk Pest Management System – Eight Step Process
 UNIT OF INSTRUCTION: Unit 2: PPT, Lecture, Guided Discussion – 60 minutes

INSTRUCTIONAL PROCEDURE:

No.	Instructional Sequence (Tasks)	Instruction Method (Performance)	Learning Difficulty
1	Establish a low-risk pest management policy.	Covered Previously in Unit 1.	Moderate
2	Know roles of people involved: occupants, pest managers, decision makers.	Lecture, Guided Discussion	Easy`
3	Pest management objectives – establish priorities.	Lecture, Guided Discussion	Easy
4	Establish action thresholds.	Lecture, Guided Discussion	Easy
5	Inspection and monitoring – pest ID.	Lecture, Guided Discussion	Moderate
6	Habitat modification – exclusion – sanitation – removal of harborage. Parasitoids and predators.	Lecture, Guided Discussion	Moderate
7	Judicious use of low-risk “approved list” pesticides, if necessary.	Lecture, Guided Discussion	Easy
8	Evaluation of results. Inspection and monitoring. Objectives. Feedback mechanism.	Lecture, Guided Discussion	Easy
9	Keep detailed records and trap counts – species, site environment information, habitat modification, etc.	Lecture, Guided Discussion	Moderate

PEST MANAGEMENT TECHNICIAN LESSON PLAN UNIT THREE

COURSE DESCRIPTION: Low-Risk Integrated Pest Management Implementation
 SUBJECT MATTER: Record Keeping
 UNIT OF INSTRUCTION: Unit 3: Guided Discussion, Hands-on Demonstration – 30 minutes

INSTRUCTIONAL PROCEDURE:

No.	Instructional Sequence (Tasks)	Instruction Method (Performance)	Learning Difficulty
1	Why keep records? Institutional memory – self protection – liability.	Lecture, Guided Discussion	Easy
2	Sanitation report – inspection observations and recommendations.	Lecture, Guided Discussion	Easy
3	Monitoring data: pest ID, trap counts, focal points of pest infestation.	Lecture, Guided Discussion, Hands-on Demonstration	Moderate
4	Action taken: exclusion, sanitation, habitat modification.	Lecture, Guided Discussion	Easy

PEST MANAGEMENT TECHNICIAN LESSON PLAN UNIT FOUR

COURSE DESCRIPTION: Low-Risk Integrated Pest Management Implementation
 SUBJECT MATTER: Voucher Specimens and Insect Collection
 UNIT OF INSTRUCTION: Unit 4: Lecture, Guided Discussion, Demonstration – 50 minutes

INSTRUCTIONAL PROCEDURE:

No.	Instructional Sequence (Tasks)	Instruction Method (Performance)	Learning Difficulty
1	Why keep a voucher collection? Reference, teach others.	Lecture, Guided Discussion	Easy
2	How to collect insects.	Demonstration, Handouts	Easy
3	How to mount and preserve insects.	Demonstration, Handouts	Moderate
4	How to identify insects.	Lecture, Demonstration, Handouts	Difficult
5	Communication: PMTs have the most important role.	Lecture, Handouts	Moderate
6	HOMEWORK ASSIGNMENT: 1. Read Manual. 2. Describe your role in the Policy implementation. 3. List evidence and sighting of pests. 4. Start collecting voucher specimens and insects.	Discussion, Handouts	Easy

PEST MANAGEMENT TECHNICIAN LESSON PLAN

PREPARATION DATE: May 7, 2008

PREPARED BY: William E. Currie

UNIT OF INSTRUCTION: Low-risk IPM Policy Implementation

TITLE OF LESSON: Inspection and Monitoring of Structures and Grounds.

INSTRUCTIONAL OBJECTIVE: Know how to perform inspection and monitoring, what they tell you, and data collection. Inspection tools. Conduct structural and landscape inspections.

TIME ALLOTTED FOR LESSON: 3 hours
METHOD OF INSTRUCTION: Lecture, guided discussion, demonstration
INSTRUCTIONAL RESOURCES: Manual, inspection chart, tools
A/V EQUIPMENT: Flip chart

GENERAL PLAN OF PRESENTATION: Review homework. How to conduct an inspection and why (hands-on). How to monitor for pests. Data collection. Incentives. Disincentives.

INTRODUCTION: Homework discussion – manual. Roles, pest evidence or sightings, good preventive measures.

EXPLANATION/APPLICATION/PRESENTATION:

Structural inspection – a snapshot in time. What to look for (and see). Think like a pest. See site from an ant's perspective (or other pest) – think small. Look for food, moisture and sheltering habitat. Check for evidence of pest presence: droppings, frass, gnaw marks, boring, nesting, rub marks, webbing, etc.

Exclusion – sanitation – habitat modification – water – food – shelter.

Monitoring: what pests are doing when no one is there. Provides information over time – 24 hours, 5-7 days – 28 days. Sticky traps will capture crawling insects for ID of species, population estimates, and indications of where population focal point is located. Tells us where pests may be, how many there are, and how extensive their habitat extends. Is the population expanding or declining?

Inspection and monitoring of pest populations on grounds turf and ornamental plants will tell what pests may be present or frequent the site. Soil health can be improved to improve turf and reduce weeds. Pests on ornamental plants may be managed with help from natural enemies (predators and parasitoids).

CONCLUSIONS/SUMMARY: Low-risk pest management requires dedication and may be tedious and time-consuming when performed correctly. A thorough understanding of why such procedures are so important frequently imparts a degree of significance to even the most mundane task. Student participants will conduct an inspection of site grounds and a structure using available tools.

HOMEWORK ASSIGNMENT:

1. Develop a sanitation report for a site they have inspected.
2. Provide monitoring data from a site they have monitored for crawling insects.
3. Examine ornamental plants for insect pest presence and describe damage.

PEST MANAGEMENT TECHNICIAN LESSON PLAN UNIT FIVE

COURSE DESCRIPTION: Low-risk Integrated Pest Management Implementation
SUBJECT MATTER: Inspection of Structures and Grounds
UNIT OF INSTRUCTION: Unit 5: Lecture, PPT, Guided Discussion, Demonstration, Student Performance
 - 3 hours

INSTRUCTIONAL PROCEDURE:

No.	Instructional Sequence (Tasks)	Instruction Method (Performance)	Learning Difficulty
1	Homework discussion and review.	Student Participation	Easy
2	Why conduct inspections? Data and information. Direct management efforts.	Lecture, Guided Discussion	Easy
3	Inspection tools.	Lecture, Guided Discussion, Demonstration	Easy
4	Structural inspection – from the outside in	Lecture, Guided Discussion, Demonstration	Moderate
5	Landscape inspection – from the fence line in to the structure.	Lecture, Guided Discussion, Demonstration	Moderate
6	Inspection of grounds and structure.	Student Performance	Moderate
7	HOMEWORK ASSIGNMENT: 1. Develop a sanitation report for a site they have inspected. 2. Provide monitoring data from a site they have monitored for crawling insects. 3. Examine ornamental plants for insect pest presence and describe damage.	Discussion, Handouts	Easy

PEST MANAGEMENT TECHNICIAN LESSON PLAN UNIT SIX

COURSE DESCRIPTION: Low-Risk Integrated Pest Management Implementation
 SUBJECT MATTER: Ants, Bees and Wasps: Biology, Behavior and Management
 UNIT OF INSTRUCTION: Unit 6: Lecture, Guided Discussion, Demonstration – 3 hours

INSTRUCTIONAL PROCEDURE:

No.	Instructional Sequence (Tasks)	Instruction Method (Performance)	Learning Difficulty
1	Homework discussion and review.	Student participation	Easy
2	Ants: general biology, behavior, low-risk pest management methods.	Lecture, Guided Discussion, Demonstration	Moderate
3	Fire ants: biology, behavior, low-risk pest management methods.	Lecture, Guided Discussion, Demonstration	Moderate
4	Social wasps: biology, behavior, low-risk pest management methods.	Lecture, Guided Discussion, Demonstration	Moderate
5	Solitary wasps and bees: biology, behavior, low-risk pest management methods.	Lecture, Guided Discussion, Demonstration	Moderate
6	Highly defensive honey bees: biology, behavior, low-risk pest management methods.	Lecture, Guided Discussion, Demonstration	Moderate
7	HOMEWORK ASSIGNMENT: 1. Develop a sanitation report for a site they have inspected. 2. Provide monitoring data from a site they have monitored for crawling insects. 3. Examine ornamental plants for insect pest presence and describe damage.	Discussion, Handouts	Easy

PEST MANAGEMENT TECHNICIAN LESSON PLAN UNIT SEVEN

COURSE DESCRIPTION: Low-Risk Integrated Pest Management Implementation
 SUBJECT MATTER: Cockroaches, Crickets, etc.: Biology, Behavior and Management
 UNIT OF INSTRUCTION: Unit 7: Lecture, Guided Discussion, Demonstration – 3 hours

INSTRUCTIONAL PROCEDURE:

No.	Instructional Sequence (Tasks)	Instruction Method (Performance)	Learning Difficulty
1	Homework discussion and review.	Student participation	Easy
2	American cockroach: general biology, behavior, low-risk pest management methods.	Lecture, Guided Discussion, Demonstration	Easy
3	Oriental cockroach: biology, behavior, low-risk pest management methods.	Lecture, Guided Discussion, Demonstration	Easy
4	Brown-banded cockroach: biology, behavior, low-risk pest management methods.	Lecture, Guided Discussion, Demonstration	Easy
5	German cockroach: biology, behavior, low-risk pest management methods.	Lecture, Guided Discussion, Demonstration	Easy
6	Crickets: biology, behavior, low-risk pest management methods.	Lecture, Guided Discussion, Demonstration	Easy
7	Earwigs: biology, behavior, low-risk pest management methods.	Lecture, Guided Discussion, Demonstration	Easy
8	Silverfish and firebrats: biology, behavior, low-risk pest management methods.	Lecture, Guided Discussion, Demonstration	Easy
9	Scorpions, centipedes, millipedes: biology, behavior, low-risk pest management methods.	Lecture, Guided Discussion, Demonstration	Easy
10	HOMEWORK ASSIGNMENT: 1. Develop a sanitation report for a site they have inspected. 2. Provide monitoring data from a site they have monitored for crawling insects. 3. Examine ornamental plants for insect pest presence and describe damage.	Discussion, Handouts	Easy

PEST MANAGEMENT TECHNICIAN LESSON PLAN UNIT EIGHT

COURSE DESCRIPTION: Low-Risk Integrated Pest Management Implementation
 SUBJECT MATTER: Rats and Mice: Biology, Behavior and Management
 UNIT OF INSTRUCTION: Unit 8: Lecture, Guided Discussion, Demonstration – 3 hours

INSTRUCTIONAL PROCEDURE:

No.	Instructional Sequence (Tasks)	Instruction Method (Performance)	Learning Difficulty
1	Homework discussion and review.	Student participation	Easy
2	Norway rat: general biology, behavior, low-risk pest management methods.	Lecture, Guided Discussion, Demonstration	Moderate
3	Roof rat: biology, behavior, low-risk pest management methods.	Lecture, Guided Discussion, Demonstration	Moderate
4	House mouse: biology, behavior, low-risk pest management methods.	Lecture, Guided Discussion, Demonstration	Moderate
5	Native mice: biology, behavior, low-risk pest management methods.	Lecture, Guided Discussion, Demonstration	Moderate
6	Hantavirus, plague and other risks: personal protection	Lecture, Guided Discussion	Easy
7	Trapping and other management skills.	Lecture, Demonstration, Student Performance	Moderate
8	HOMEWORK ASSIGNMENT: 1. Develop a sanitation report for a site they have inspected. 2. Provide monitoring data from a site they have monitored for crawling insects. 3. Examine ornamental plants for insect pest presence and describe damage.	Discussion, Handouts	Easy

PEST MANAGEMENT TECHNICIAN LESSON PLAN UNIT NINE

COURSE DESCRIPTION: Low-Risk Integrated Pest Management Implementation
 SUBJECT MATTER: Gophers, Squirrels, Bats, Snakes: Biology, Behavior and Management
 UNIT OF INSTRUCTION: Unit 9: Lecture, Guided Discussion, Demonstration, PPT – 3 hours

INSTRUCTIONAL PROCEDURE:

No.	Instructional Sequence (Tasks)	Instruction Method (Performance)	Learning Difficulty
1	Homework discussion and review.	Student participation	Easy
2	Gophers, ground squirrels, squirrels: general biology, behavior, low-risk pest management methods.	Lecture, Guided Discussion, Demonstration	Moderate
3	Bats: biology, behavior, low-risk pest management methods.	Lecture, Guided Discussion, Demonstration	Moderate
4	Birds: biology, behavior, low-risk pest management methods.	Lecture, Guided Discussion, Demonstration	Moderate
5	Snakes: biology, behavior, low-risk pest management methods.	Lecture, Guided Discussion, Demonstration	Moderate
6	HOMEWORK ASSIGNMENT: 1. Develop a sanitation report for a site they have inspected. 2. Provide monitoring data from a site they have monitored for crawling insects. 3. Examine ornamental plants for insect pest presence and describe damage.	Discussion, Handouts	Easy

PEST MANAGEMENT TECHNICIAN LESSON PLAN UNIT TEN

COURSE DESCRIPTION: Low-Risk Integrated Pest Management Implementation
 SUBJECT MATTER: Termites and Wood Destroying Organisms: Biology, Behavior and Management
 UNIT OF INSTRUCTION: Unit 10: Lecture, Guided Discussion, Demonstration – 3 hours

INSTRUCTIONAL PROCEDURE:

No.	Instructional Sequence (Tasks)	Instruction Method (Performance)	Learning Difficulty
1	Homework discussion and review.	Student participation	Easy
2	Subterranean termite: general biology, behavior, low-risk pest management methods.	Lecture, PPT, Guided Discussion	Moderate
3	Drywood termites: biology, behavior, low-risk pest management methods.	Lecture, PPT, Guided Discussion	Moderate
4	Borates as wood protection.	Lecture, PPT, Guided Discussion	Moderate
5	Heat as a management option.	Lecture, PPT, Guided Discussion	Moderate
6	Sentricon system for subterranean termites.	Lecture, Demonstration, Hands-on	Moderate
7	Wood destroying insects.	Lecture, PPT, Guided Discussion, Demonstration	Difficult
8	Wood rot and decay.	Lecture, PPT, Guided Discussion, Demonstration	Difficult
9	HOMEWORK ASSIGNMENT: 1. Develop a sanitation report for a site they have inspected. 2. Provide monitoring data from a site they have monitored for crawling insects. 3. Examine ornamental plants for insect pest presence and describe damage.	Discussion, Handouts	Easy

PEST MANAGEMENT TECHNICIAN LESSON PLAN UNIT ELEVEN

COURSE DESCRIPTION: Low-Risk Integrated Pest Management Implementation
SUBJECT MATTER: Stored Product Pests: Biology, Behavior and Management
UNIT OF INSTRUCTION: Unit 11: Lecture, Guided Discussion, Demonstration – 3 hours

INSTRUCTIONAL PROCEDURE:

No.	Instructional Sequence (Tasks)	Instruction Method (Performance)	Learning Difficulty
1	Homework discussion and review.	Student participation	Easy
2	Beetles infesting stored products: biology, behavior, low-risk pest management methods.	Lecture, PPT, Guided Discussion, Demonstration	Moderate
3	Moths infesting stored products: biology, behavior, low-risk pest management methods.	Lecture, PPT, Guided Discussion, Demonstration	Moderate
4	HOMEWORK ASSIGNMENT: 1. Develop a sanitation report for a site they have inspected. 2. Provide monitoring data from a site they have monitored for crawling insects. 3. Examine ornamental plants for insect pest presence and describe damage.	Discussion, Handouts	Easy

PEST MANAGEMENT TECHNICIAN LESSON PLAN UNIT TWELVE

COURSE DESCRIPTION: Low-Risk Integrated Pest Management Implementation
SUBJECT MATTER: Weeds and Ornamental Pests: Biology, Behavior and Management
UNIT OF INSTRUCTION: Unit 12: Lecture, Guided Discussion, Demonstration – 3 hours

INSTRUCTIONAL PROCEDURE:

No.	Instructional Sequence (Tasks)	Instruction Method (Performance)	Learning Difficulty
1	Homework discussion and review.	Student participation	Easy
2	Weeds: Why are they there? Biology, nutrients, mowing, water, aeration, mulches, etc.	Lecture, PPT, Guided Discussion	Moderate
3	Soil health and biology.	Lecture, PPT, Guided Discussion	Moderate
4	Ornamental pests: biology, behavior, natural enemies, physical management methods.	Lecture, Guided Discussion, Demonstration	Moderate
5	Homework assignment.	Discussion, Handouts	Easy

PEST MANAGEMENT TECHNICIAN LESSON PLAN UNIT THIRTEEN

COURSE DESCRIPTION: Low-Risk Integrated Pest Management Implementation
 SUBJECT MATTER: Toxic Mold and Poria: ID, Biology, and Management
 UNIT OF INSTRUCTION: Unit 13: Lecture, Guided Discussion, Demonstration – 3 hours

INSTRUCTIONAL PROCEDURE:

No.	Instructional Sequence (Tasks)	Instruction Method (Performance)	Learning Difficulty
1	Homework discussion and review.	Student participation	Easy
2	Toxic mold: ID, biology and management.	Lecture, PPT, Guided Discussion, Demonstration	Moderate
3	Poria, water transporting mold: biology and management.	Lecture, PPT, Demonstration	Difficult
4	Homework assignment.	Discussion, Handouts	Easy

PEST MANAGEMENT TECHNICIAN LESSON PLAN UNIT FOURTEEN

COURSE DESCRIPTION: Low-Risk Integrated Pest Management Implementation
 SUBJECT MATTER: Pesticide Toxicology, Laws and Regulations
 UNIT OF INSTRUCTION: Unit 14: Lecture, Guided Discussion, Demonstration – 3 hours

INSTRUCTIONAL PROCEDURE:

No.	Instructional Sequence (Tasks)	Instruction Method (Performance)	Learning Difficulty
1	Homework discussion and review.	Student participation	Easy
2	Pesticides: how they affect people and the environment.	Lecture, Guided Discussion	Difficult
3	Laws and regulations: how to comply	Lecture, Guided Discussion	Moderate
4	Homework assignment – prepare for the test.	Discussion, Handouts	Easy

PEST MANAGEMENT TECHNICIAN LESSON PLAN UNIT FIFTEEN

COURSE DESCRIPTION: Low-Risk Integrated Pest Management Implementation
 SUBJECT MATTER: Pest Management Technician Exam for CEU Points
 UNIT OF INSTRUCTION: Unit 15: Lecture, Guided Discussion, Demonstration – 3 hours

INSTRUCTIONAL PROCEDURE:

No.	Instructional Sequence (Tasks)	Instruction Method (Performance)	Learning Difficulty
1	Written and practical test to demonstrate knowledge and skills of Pest Management Technicians.	Student performance	Moderate

PEST MANAGEMENT TECHNICIAN

INTERIM EXAM

1. Define low-risk Integrated Pest Management (IPM):

2. Describe the first level of defense in an IPM program.

3. What is your definition of a pest?

4. List the following information from the "Bioganic" label:

Signal Word

EPA Reg. No.

Brand Name

Active Ingredient(s)

Precautions

Application Sites

5. List common and species name (from photo):

6. Describe the life cycle (stages, time, etc.) for the above pest.

7. Describe the life style (habitat, food preference, etc.) for the above pest.

8. List five (5) tools you use to conduct an inspection.

9. How do you manage moderate to heavy pigeon presence at a site?

10. How should you manage Giant Whitefly on Red Hibiscus?

11. Name three (3) ways to help turf out-compete weeds.

12. What is the most dangerous health threat from a vertebrate animal?

13. What is the most effective method for managing Black Widow spiders?

14. List common and species name (from photo).

15. What is the most common health threat in a school environment?

16. List the following from the "Tim-Bor" label:
EPA Reg. No. Signal Word
Active Ingredients
Target Pests

17. Describe the preferred habitat of the Oriental cockroach.

18. List the common and species name for this pest (from photo).

19. Where does *Rattus norvegicus* prefer to live?

20. What disease may be transmitted by a flea feeding on a rat?

21. What is the preferred habitat for the American cockroach?

22. What tree is commonly infested by the Cuban Laurel Thrip?

23. What type of food can be consumed by adult and larval stages of the carpenter ant?

24. What type of food can be consumed only by the larval stage of the carpenter ant?

25. What are your most important roles in the low-risk, integrated pest management program?

PEST MANAGEMENT TECHNICIANS

FINAL EXAM

1. Define integrated pest management:
 - No pesticides
 - Spray as needed
 - Risk reduction
 - Glue traps

2. What do all living organisms require?
 - Sex, light, comfort, cell phone, cable
 - Warmth, shelter, air, water, food
 - Air, water, sex, comfort, home
 - Light, dark, 98°F, food, CO₂

3. In a site structure with a good IPM program, what is the first line of defense?

4. How does good sanitation affect the biological needs of a pest?

5. A Black Widow spider is beneficial because it indicates air flow in a structure and captures flying insects.

True	False
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6. This cockroach species can produce a large population in a very short time.
 - *Blattella germanica* (L)
 - *Periplaneta Americana* (L)
 - *Supella longipalpa* (F)
 - *Blatta orientalis* L.

7. Describe at least one non-pesticidal method that is effective in managing drywood termites:

Subterranean termites:

8. Describe two (2) effective methods for managing Argentine ants in structures:

9. Which steps are appropriate for managing cat fleas on a site?

- Spray rooms and grounds with d-Limonene three times, three days apart.
- Capture the host animal and spray it.
- Capture and remove the host animal(s), and spray to kill the flea eggs.
- Capture and remove the host animal(s); eliminate host animal harborage, food and water; treat area for fleas with a low-risk insecticide.

10. The large paper wasp nest on the ceiling of the outdoor lunch area can easily be managed in September.

True

False

11. Describe the procedure for deciding to use a pesticide not on the “approved product list” for a new pest not listed in products on the approved list.

12. If the wrong pesticide has been accidentally applied to a site, you should

- Notify the County Agricultural Commissioner at once
- Notify the Water Quality Control Board at once
- Call the nearest Poison Control Center for advice.
- Watch for adverse effects and, if they appear, notify the County Agricultural Commissioner.

13. Dealing with fires involving pesticides requires:

- Large amounts of water to disburse the burning materials.
- Professional help, equipped and trained to fight pesticide fires.
- Seeking immediate help from neighbors.
- Waiting until the burning is nearly stopped before calling the Fire Department.

14. Leftover pesticides for which you have no use may be disposed of by:

- Sending them to the County landfill.
- Draining containers over a large area.
- Transporting them to a Class 1 disposal site.
- Pouring into a storm drain.

15. In a cafeteria or kitchen, Lo-Line monitoring traps provide the following data:

- 3 Lo-Lines near ovens have 3 adult American cockroaches and 18 nymphs
- 1 Lo-Line has only legs and wings from 1 American cockroach
- Mouse droppings at the floor/wall junction near the Lo-Line traps
- Food material is observed in corners under cabinets and shelving.
- Standing water on the floor
- General sanitation is poor

Describe actions to be taken to achieve an adequate level of pest management.