

Study guidelines for permit exam GRC (General pest and rodent control)

Some information you should have knowledge of before taking the permit examination for General pest and rodent control.

This outline may be used as a study guide for the permit examination General pest and rodent control. The Mississippi Bureau of Plant Industry is providing a list of subject areas you need to study for the license examination.

A copy of the Regulations Governing Commercial Insect, Rodent, Plant Disease and Weed Control Work can be found at The Mississippi Department of Agriculture and Commerce, Bureau of Plant Industry website <https://agnet.mdac.ms.gov/agManage/uploads/1641.pdf>. **Please note that you should be familiar with the topics in this outline, but there is no guarantee that all the topics listed, or only the topics listed will be included on any Permit examination.**

1. You should be thoroughly familiar with Bureau of Plant Industry Regulations Governing Commercial Insect, Rodent, Plant Disease and Weed Control Work. Topics include, but are not limited to:

Definitions: Aerosols; Trainer
Permit test requirements
Issuance of permit
Permit renewal requirements
Registered technician standards/training
Violations
Record keeping requirements
Record access
Pesticide storage and transport
Bond and insurance requirements
Equipment

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2. Insects: structure, function and development

External morphology: head, thorax and abdomen.

Internal morphology: respiratory (spiracles), circulatory, and nervous systems

Metamorphosis:

Without
Gradual
Incomplete
Complete

Be able to ID, know typical habitat, life cycle and management strategies of the following:

3. Cockroaches

General biology, behavior, management, ID egg capsules, nymphs, and adults of:

German
American
Oriental
Smoky brown
Asian

Terminology:

- Thigmotaxis
- Ootheca

4. Ants

External and internal morphology of: wings, antennae, and body structure

5. Fleas

Life cycle
Feeding habits of larvae and adults
Hosts
Management strategies

6. Varied carpet beetles

Feeding habits
Control strategies

7. Mosquitoes

Life cycle
Habitat
Feeding habits of: males and females
Diseases transmitted by
Management strategies

8. Diptera

Flesh flies; Blow flies; Fungus gnats; Moth/drain flies; Filth flies; Phorid flies

9. Hymenoptera

Bald-faced hornet; Paper wasps; Yellowjacket; Argentine ant; Imported fire ant; Acrobat ant; Carpenter ant

10. Orthoptera

Camel crickets

11. Psocoptera

Psocids

12. Hemiptera

Bed bugs;

13. Coleoptera

Ground beetles; Rice weevils
Asian lady beetle

14. Lepidoptera

Webbing clothes moth
Indian meal moth

15. Thysanura

Silverfish

16. Occasional Invaders

Centipedes; Millipedes

17. Spiders

Brown recluse
Wolf
Jumping
Common house spider
Common habitat for each
Venom and effect on humans:
Brown recluse
Control strategies

18. Ticks

American dog tick
Life cycle
Hosts
Diseases transmitted by

19. Rats

Roof rat; Norway rat
Behavior
Habitat
Diseases carried by
Fecal dropping ID
Control strategies
Terminology: neophobic

20. Rodenticides. Be thoroughly familiar with different classes, common product trade names and modes of action.

First Generation Anticoagulants:

Warfarin, Chlorophacinone, Diphacinone

Second Generation Anticoagulants:

Brodifacoum, Bromadiolone

Non-anticoagulants:

Bromethalin, Cholecalciferol
Zinc Phosphide

21. What is FIFRA?

22. Urban Pest Birds and Urban Wildlife

Snakes

Poisonous vs. nonpoisonous
Control strategies

Bats

Control strategies; Rabies

23. Pesticides

Know how to interpret the label
LD50 interpretation – What is it?
Signal word interpretation:

- Danger/Danger-Poison (w/skull & cross bones)
- Warning
- Caution
- Caution or no signal word

Acaricides – controls mites
Examples of pyrethroid insecticide active ingredients?
Pesticide mixing; Pesticide application;
Pesticide cleanup; Pesticide transport;
Pesticide spills; Pesticide disposal;
Pesticide safety

24. Calculations involving barrier, aerosol and crack and crevice treatments

25. Presented on exam as Photo ID:

Varied carpet beetle
Yellowjacket nest entrance
Ground beetle
Asian lady beetles
Bed bug
German cockroach
American cockroach
Oriental cockroach
Black carpenter ant
Imported fire ant
Acrobat ant
Asian tiger mosquito
Flea
Phorid fly
Blow fly
Flesh fly
Moth (drain) fly
Paper wasp
Camel cricket
Indian meal moth
Webbing clothes moth
Centipede

American dog tick
Formosan termite swarmer
Wolf spider
Brown recluse spider
Jumping spider
Silverfish