

MASTER GARDENER HOMEWORK DUE SEPTEMBER 20, 2010

Topic: *“Entomology; Insects – Good Guys/Bad Guys, Their ID and Controls including the EARTH-KIND™ IPM Approach”*

Reading assignment: **Texas Master Gardener Handbook**, Chapter 4, Pages 4-1 to 4-23 and **Lone Star Gardening** articles: *“Preventing Headaches of High Maintenance”* and *“Some effective ways to protect your houseplants from pesty insects.”*

1. Integrated pest management (IPM) is the pest management strategy implemented by the Texas AgriLife Extension Service.
 - a. IPM is a cost-effective strategy to _____, _____, and _____ pest damage with minimum harm to _____, the _____, and _____.
 - b. IPM is a _____ founded on the principles of entomology, soil science, plant physiology, plant pathology, applied ecology, and related sciences.
2. The word “integrate” in IPM refers to integration at multiple levels: The principles of many scientific disciplines are integrated; _____ are integrated with _____ to avoid or minimize damage; and all available pest-control tools are integrated, including _____ control, _____ control, and _____ control.
3. To recognize the symptoms of a plant problem, you must know _____.
4. Most plant problems are caused by factors that fall into one of three general categories:
 - a. _____ or other arthropods.
 - b. _____ diseases.
 - c. Plant _____ or _____, including weed stress.
5. To prevent or minimize the problems caused by pests, it is important to have a basic understanding of the _____ of the insects and their relatives. This includes knowing about their _____, _____, and _____.

6. Common arthropods in landscapes include: (please list examples)
- a. Isopoda _____, _____, and _____
 - b. Arachnida _____, _____, _____ and _____
 - c. Diploda _____
 - d. Chilopoda _____
7. The mouth is the most remarkable structural feature of insects. (please list examples of the insects with the below listed mouthpart feature)
- a. Sponging mouthparts _____
 - b. Lacerating-sucking feeding cones _____
 - c. Chewing-lapping mouthparts _____
 - d. Piercing-sucking mouthparts _____

 - e. Siphoning mouthparts _____
8. When looking for insect damage, and insects are not present, one would look for _____, _____, _____, _____, or _____.
9. Plant injury caused by insects can be distinguished by specific clues left on the foliage. List six types of injury caused by insects.
- a. _____
 - b. _____
 - c. _____
 - d. _____
 - e. _____
 - f. _____
10. Insects are beneficial to the gardener in several ways. They aid in the production of _____, _____, _____, and _____ by pollinating the blossoms.