1. Plant identification is important for several reasons. List three of them.

2. Why is it important to learn the botanical names of plants when common names are easier to say and remember?*

3. The plant classification system is made up of several levels. Which are the two most important levels for the typical gardener?

4. The term "cultivar" is an abbreviation for what? Why are cultivars important?

*You may need to use other chapters, additional reference materials, or your own experience to answer this question fully.
1. Explain why good soil structure is important to gardeners.

2. Mark each of the following statements as True (T) or False (F).*
   — Clay loam soil is unable to hold enough water for good plant growth.
   — Clay loam soil remains cool and wet late into the spring.
   — Clay loam soil stays warm late into the fall.
   — Clay loam soil needs drainage improvement.
   — Clay loam soil takes more lime to correct an acidity problem than would a sandy loam.

3. A client has cold, wet soil. List two problems that are likely to occur in his garden.

   What could you recommend to help alleviate these problems?

*You may need to use other chapters, additional reference materials, or your own experience to answer this question fully.
Review questions
Chapter 2—Soils and Fertilizers

4. A house was built on a parcel of land that previously was covered with brush. The land was cleared, and the debris and much of the topsoil were removed from the site. List two soil problems the homeowner is likely to have in this situation. *

What could you recommend to help with these problems? *

5. Soil abounds with life. Why is this life important in a practical way to gardeners?

6. Why should you add organic matter to your garden soil?

7. A gardener mulches her vegetable garden with straw just after planting some young transplants. A short time later, she observes that the leaves of the plants are turning yellow. What is one possible nutrient-related cause of the yellowing? How would you advise her to correct the problem?

*You may need to use other chapters, additional reference materials, or your own experience to answer this question fully.
8. Mark each of the following statements as True (T) or False (F). For true statements, indicate whether the statement identifies an advantage or a disadvantage of using an organic fertilizer.

- Nutrients in most organic fertilizers are quickly available to plants.
- Most organic fertilizers improve the long-term nutrient-holding capacity of soils.
- Using organic fertilizers usually involves recycling materials that otherwise would be discarded.
- Using organic fertilizers increases the risk of nitrogen leaching into the groundwater.
- Organic fertilizers usually have a low nutrient content.

9. A fertilizer label reads 18-46-0. What does this mean?

10. What are the best methods for determining how much fertilizer to use on a garden?

11. If an Extension publication (e.g., EC 1503) recommends applying 2 pounds of 16-20-0 fertilizer per 100 square feet, how many pounds of fertilizer would you put on a 20' x 15' garden?

12. How much fresh cow manure could you use as a substitute for the fertilizer in #11?

What precautions would you take when using manure?

13. List the three ways that soil pH affects plants.

14. What is the “ideal” soil pH range for a vegetable garden?

15. What happens when soil pH is higher or lower than the ideal range?
16. How can a gardener increase soil pH? How can he/she decrease it?

17. What is the effect of rototilling garden soil when it is too wet? (Mark the one best answer.)
   ____ (a) It destroys soil structure.
   ____ (b) It causes soil to warm up slowly.
   ____ (c) It adds organic matter to the soil.
   ____ (d) All of the above.

18. Which of the following would help a compost pile that is not heating? (Mark all correct answers.)
   ____ (a) Add an electric heating coil.
   ____ (b) Add a material with a low C:N ratio.
   ____ (c) Add a commercial compost additive.
   ____ (d) Turn the pile more frequently.
   ____ (e) Keep the pile moist.
Composting

1. Air is necessary for a compost pile to work. Why?

2. What happens in a compost pile if there is no air present?

3. A good compost pile contains a variety of raw materials. Define each of the following and give examples:
   - Energy materials
   - Bulking agents
   - Balanced raw materials

4. Why is particle size important in a compost pile?

5. Why does compost need to “cure” before being applied to a garden?

6. What are some problems with using manure in a compost pile?

7. What are some kinds of manure that never should be used in a compost pile?