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 time 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.
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. __ T
   - Most organic fertilizers improve the long-term nutrient-holding capacity of soils. __ T
   - Using organic fertilizers usually involves recycling materials that otherwise would be discarded. __ T
   - Using organic fertilizers increases the risk of nitrogen leaching into the groundwater. __ T
   - Organic fertilizers usually have a low nutrient content. __ F

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.