Appendix E: Example Exam Questions—Type B

Example Problems

1. Your slurry tanker holds 2,000 gallons and you apply 7 loads to each acre. How much waste have you applied (gallons per acre)?
   a. 2,000 gal/acre
   b. 14,000 gal/acre
   c. 286 gal/acre
   d. 40,000 gal/acre

2. Your slurry analysis shows 4.3 pounds of plant-available nitrogen (PAN) per 1,000 gallons. How much slurry must you apply (gallons per acre) per year to meet the needs of a crop requiring 150 pounds of PAN per year?
   a. 64,500 gal/acre
   b. 150,000 gal/acre
   c. 34,900 gal/acre
   d. 43,200 gal/acre

3. What travel speed (inches per minute) should you select on a traveling gun if you have the following situation: flow rate is 200 gpm, lane spacing is 250 feet, and you wish to apply 0.6-inch depth of wastewater application?
   a. 15.4 in./min
   b. 25.7 in./min
   c. 2.6 in./min
   d. 9.2 in./min

4. Your dairy operation generates 900,000 gallons per year of waste slurry. Based on your waste management plan and waste analysis, you can apply 40,000 gallons per acre to meet the crop needs for PAN. How many acres are needed to satisfy the waste management system at this operation?
   a. 50 acres
   b. 22 acres
   c. 5 acres
   d. 1,500 acres
5. If you are using a solids spreader, and you apply 1 ton over an area 20 feet by 150 feet, what is your application rate in tons per acre?
   a. 14.5 tons/acre
   b. 290 tons/acre
   c. 7.5 tons/acre
   d. 0.1 ton/acre

6. Your wastewater irrigation scheduling should consider which of the following?
   a. The cover crop and its stage of growth
   b. The liquid level of the lagoon
   c. The time of year
   d. All of the above

7. If you must remove sludge (solids) from a lagoon or holding tank, you can assume that the sludge has the same nitrogen concentration as the lagoon liquid.
   a. True
   b. False

8. What application rate (tons per acre) is achieved with your 6-ton manure spreader if you drive at 3 mph, it takes 4 minutes to empty the spreader, and the effective application width is 25 feet?
   a. 0.44 ton/acre
   b. 29.7 tons/acre
   c. 2.5 tons/acre
   d. 9.9 tons/acre

9. One possible method for reducing solids and nutrient loading to a waste storage pond is:
   a. Push all feed spillage to the storage pond
   b. Install a solids collector before the storage pond
   c. Agitate waste storage pond weekly
   d. Add milking floor washwater to the waste storage pond

10. During a spreader calibration, you apply 22 pounds of manure to a plastic sheet measuring 10 feet by 10 feet. What is the application rate for the spreader (tons per acre)?
    a. 4.8 tons/acre
    b. 2.2 tons/acre
    c. 480 tons/acre
    d. 12.6 tons/acre
**ANSWER KEY—TYPE B:**

1. b  
2. c  
3. b  
4. b  
5. a  
6. d  
7. b  
8. d  
9. b  
10. a