1. The order of ecological hierarchy for microorganisms is:
   a. Communities → populations → ecosystem
   b. Guilds → populations → communities → ecosystems
   c. individual cells → guilds → populations → communities → ecosystem
   d. individual cells → populations → guilds → communities → ecosystem
   e. None of the above.

2. The density-dependent consumption of bacteria by protozoa represents what type of microbial interaction?
   a. commensalism
   b. amensalism
   c. predation
   d. mutualism
   e. protocooperation

3. The secondary metabolite made by actinomycetes that is responsible for the typical earthy odor of soil is:
   a. streptomycin
   b. geosmin
   c. N-acyl homoserine lactone
   d.Activated sludge
   e. auxin

4. The major final microbial metabolites produced in the sewage anaerobic digestor are:
   a. CO₂ and CH₄
   b. acetate and CH₄
   c. amino acids, CO₂, H₂
   d. CO₂ and H₂
   e. CO₂, CH₄ and acetate