**Collection Systems**

1. What term is used to describe water that enters the collection system from sources such as foundation drains holes in manhole covers, surface runoff, and cross connections between sanitary and storm sewers?

A. Inflow.  
B. Infiltration.  
C. Seepage.  
D. Inflow and filtration.

2. What bacterium is responsible for hydrogen sulfide gas production in sewer lines?

A. Thiobacillus  
B. Nitrosomonas  
C. Escherichia coli  
D. Pseudomonas

3. To prevent solids from settling in the pipe, flow velocities should be kept at or above what minimum velocity?

A. 1.0 ft/s.  
B. 2.0 ft/s  
C. 4.0 ft/s  
D. 8.0 ft/s

4. Elements of a grease management plan should include identification of accelerated cleaning cycles, enforcement capability, and what else?

A. An equipment inventory  
B. Organizational charts  
C. Public outreach and educational programs  
D. Collection system preventive maintenance cycles

5. A large lift station located just ahead of a treatment plant can create problems by periodically sending large volumes of flow to the plant on minute, and virtually nothing the next minute. These fluctuating flows can be reduced by

A. Developing a good FOG program B. Using variable speed pumps

C. Recalibrating the flow meter D. Replace the low meter with a Parshall flume

6. During a period when there is no pumping from the wet well, the water level rises 0.7 ft in one minute. If the wet well is 8 ft. long and 7 ft. wide, what is the gpm flow rate of wastewater entering the wet well?

1. 5.2 gpm
2. 39.2 gpm
3. 293 gpm
4. 326 gpm

**Collection System - Key**

1. A

2. A

3. B

4. C

5. B

6. C

6. During a period when there is no pumping from the wet well, the water level rises 0.7 ft in one minute. If the wet well is 8 ft. long and 7 ft. wide, what is the gpm flow rate of wastewater entering the wet well?

8 ft. x 7 ft. x 0.7 ft. x 7.48 gal/cu ft. = 293 gpm

1 min.