

NEW



**Exam Basics Review
Collection Systems
Grades III & IV
Practice Problems**

*The Division of Water Quality
makes no claim as the accuracy of
any answers provided herein.*

Certification Exam Review
Collections Grade III & IV

General Questions

1. Wastewater is collected in Utah by two different sewer systems, what are they?

1. _____

2. _____

2. Wastewater is generated by numerous sources. Name three sources

1. _____

2. _____

3. _____

3. The strength of wastewater is measured by the BOD test. What does BOD stand for?

B _____

O _____

D _____

4. An other test of wastewater is the TSS test. What does TSS stand for?

T _____

S _____

S _____

5. What is the name for a group of disease causing organisms?

6. Name a disease that may be transmitted by wastewater?

Chlorine

18. If there is a chlorine leak the chlorine will do what?
19. Chlorine is added to wastewater to do what?
20. Where would you put a vent in a chlorine storage building?
21. When chlorine combines with wastewater it forms what acid?
22. What chemical is added sewerage to control hydrogen sulfide?
23. When changing a chlorine cylinder out, how many times should the washers be used?

Trenches

24. Trenches must be shored that are deeper that _____ feet.
25. What is the soil removed from a trench is called?
26. The spoil pile must be _____ feet from the edge of the trench.
27. Name three methods for shoring a trench?
 1. _____
 2. _____
 3. _____

Sewer Cleaning

28. There are three types of cleaning of a sewer system, what are they?

1. _____

2. _____

3. _____

29. What are two methods of hydraulic cleaning?

1. _____

2. _____

30. What are the ribs on a sewer ball for?

pH

31. pH is measure on a scale from _____ to _____

32. A pH of 4.5 is acidic or basic?

33. What is a neutral pH?

34. Is chlorine more effective at an acidic or basic pH?

35. If there is a strong smell of "rotten eggs" when you lift a manhole, given this fact what would you expect the pH of the wastewater to be acidic or basic?

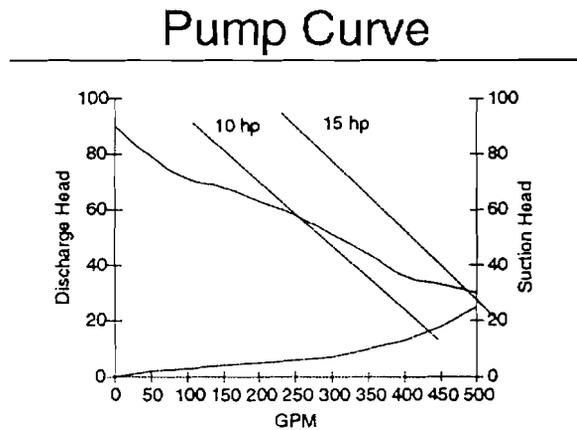
Pumps and Pumping

36. If a pump is running well above it's design flow, what is happening?

37. If you close the discharge valve on a positive displacement pump, what happens?

38. If you close the discharge valve on a centrifugal pump, what happens?
39. If a centrifugal pump is drawing higher than normal amperage, what is a potential problem?
40. If a centrifugal pump is drawing lower than normal amperage, what is a potential problem?
41. What happens to a centrifugal pump when you increase the speed, if the head remains the same?
42. Given the pump curve to the right

- a. What is the discharge rate against a pressure head of 50 feet?
- b. What is the required horsepower for a discharge head of 50 feet?
- c. What is the maximum suction head against a discharge head of 50 feet?



43. What is cavitation?

Pretreatment

44. Is there any thing that cannot be discharged in to the sewer?
45. What is the major pollutant generated from restaurants?
46. What is the major pollutant generated from dry cleaners?

47. What is the major pollutant generated from food processor?
48. What is the major pollutant generated from refineries?
49. What is the major pollutant generated from soft drink manufactures?
50. What is the major pollutant generated from pharmaceuticals manufactures?