

**GRADE III
WWTP OPERATOR
EXAMINATION INFORMATION**

The Grade III examination contains questions regarding the following subjects: basic safety practices, hazards encountered during wastewater treatment plant operations, sampling and simple analysis of wastewater constituents, and operation and maintenance procedures in preliminary and primary treatment unit processes, anaerobic sludge digestion and disinfection.

It also includes specific questions on the operation and maintenance of wastewater stabilization ponds and state regulations regarding the classification of wastewater treatment plants and operator certification.

Other questions may deal with secondary unit processes (e.g. trickling filters, activated sludge), sludge handling, evaluation of wastewater unit processes as well as overall plant performance and basic supervision.

In addition, the Grade III examination includes questions on process control, activated sludge process modifications and tertiary treatment. Examinees will be asked to write essay answers to some questions.

The Grade III examination also contains mathematical questions. Examinees may be asked to write essay answers and calculate a variety of problems including efficiency and loading of solid thickening processes, disinfectant usage, digester loading, pumping efficiency, standard BOD test, hydraulic or organic loading rate, activated sludge wasting rate, MLVSS and MLSS, sludge pumping rate, nitrogenous BOD calculation, F/M ratio and polymer usage. The examinee should be familiar with typical calculations related to the subject matter listed in paragraph 1. Examinees must work out the math problems. Answers to math questions that are not supported by calculations will **NOT** receive credit.

Examinees are given 3 ½ hours to complete the examination. The question format is as follows:

25 True/False Questions	@	1 point each
20 Multiple Choice Questions	@	2 points each
2 Mandatory Essay Questions	@	10 points each
7 Math Problems (Work 7 of 8)	@	8 points each

TOTAL POINTS 141

Passing Score: To pass, you must achieve:

(a) a minimum total score of 98.7 points (70 percent), AND
a score of at least 28 points (50 percent) on the Math Questions.