

## Take Test: Unit VIII Assessment

### Test Information

#### Description

#### Instructions

- This assessment can be opened multiple times, but can only be submitted once.
- You may print this assessment to mark your answers prior to entering them online, or you may enter your answers directly online.
- Periods of inactivity will cause your assessment to time out resulting in an unwanted submission, so be sure to save each answer as you complete the question in order to avoid losing any work.
- For a description of the various types of questions you may encounter in an assessment, [click here](#) to view the Submission Instructions page.
- Outside sources are not required; however, when directly quoted or paraphrased works of others are used in any manner, the writer is obligated to properly cite the source of the original material.
- To view your Written Response Grading Rubric, [click here](#).

Multiple Attempts Not allowed. This test can only be taken once.

Force Completion This test can be saved and resumed later.

Question Completion Status:

Save All Answers

Close Window

Save and Submit

### Question 1

50 points Save Answer

You are an industrial hygienist conducting personal sampling on a worker who is overseeing a production process involving use of acetone (*Note: The Occupational Safety and Health Administration has established a Permissible Exposure Limit of 1000 parts per million (ppm) of acetone*). You are able to measure the following exposures:

700 ppm for 3 hours  
1300 ppm for 2 hours  
900 ppm for 3 hours

What is the calculated TWA? What would you tell plant management in terms of exposure to acetone and compliance with the PEL?

Attach File

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### Question 2

50 points Save Answer

Please solve the following problem, indicating your response on a Word document and submitting the document via File Upload.

Using the following formula, solve the problem below, and show your work.

$$TWA = \frac{CaTa + CbTb + \dots + CnTn}{8}$$

*TWA* = Time-Weighted Average

*Ca* = Concentration of contaminant during the sampling period "a"

*Ta* = Time of sampling period "a"

*Cb* = Concentration of contaminant during the sampling period "b"

*Tb* = Time of sampling period "b"

*Cn* = Concentration of contaminant during the sampling period "n", where "n" is the last of a series of contaminants

*Tn* = Time of sampling period "n"

*Note:* All concentrations are in parts contaminant per million parts of air or milligrams of contaminant per cubic meter of air.

**Air Sampling Problem:** You are an industrial hygienist that is conducting personal sampling on a worker who is overseeing a production process involving use of toluene (*Note:* The Occupational Safety and Health Administration has established a Permissible Exposure Limit of 200 parts per million (ppm)). You are able to measure the following exposures:

500 ppm for 1 hour  
100 ppm for 4 hours  
225 ppm for 3 hours

What is the calculated TWA? What would you tell plant management in terms of exposure to toluene and compliance with the PEL?

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**Save and Submit**

*Click Save and Submit to save and submit. Click Save All Answers to save all answers.*

Save All Answers

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