Lab 8 - Statistics and Ventilation

Due Oct 11 at 7am	**Points** 12	**Questions** 12	**Time Limit** None

Attempt History

	Attempt	Time	Score
LATEST	Attempt 1	2,606 minutes	11 out of 12

ⓘ Correct answers are hidden.

Score for this quiz: **11** out of 12
Submitted Oct 8 at 10:52am
This attempt took 2,606 minutes.

Incorrect

Question 1

0 / 1 pts

You are performing Total Dust air monitoring for exposure to Particulates Not Otherwise Regulated (PNOR). Review the appropriate NIOSH Method for for the sampling and analytical procedure along with the applicable OSHA Z Table. Given the information in these documents, if your result was 16.67 mg/m^3, how would you classify this exposure?

- (●) Violation
- ( ) Possible Violation
- ( ) No Violation

Question 2

1 / 1 pts

If the 95UCL of a distribution of personal air samples is 78 ppm and the ACGIH TLV is 200 ppm, what AIHA exposure category would you assign to this exposure?

- 3
- 4
- 2
- 1

Question 3

1 / 1 pts

A laboratory chemical hood has an opening that is 18 inches high by 60 inches wide. You perform a 8-point traverse with a hot wire anemometer and obtain the readings displayed in the table below. What is the volumetric flow of the hood in cfm?

Measurement	fpm
1	105
2	107
3	111
4	108
5	112
6	108
7	109
8	103

- 116505
- 14.38
- 725
- 6472.5
- 809

Question 4

1 / 1 pts

A rectangular flammable liquids storage room has a 14 ft ceiling and a floor that is 10 ft by 12 ft. Determine the volumetric flow rate of air in cfm necessary to ventilation the room in compliance with IFC (2015) Ch. 50 5004.3.1 (2).

- Not enough information to calculate
- 168
- 120
- 150

Question 5

1 / 1 pts

A rectangular flammable liquids storage room has a floor that is 10 ft by 12 ft. Determine the volumetric flow rate of air in cfm necessary to ventilation the room in compliance with the OSHA 1910.106(d)(4)(iv).

- Not enough information to calculate
- 150
- 168
- 120

Question 6

1 / 1 pts

Assuming the air monitoring data in the table below is log-normally distributed, calculate the 95UCL of the distribution.

Sample	TWA (8hr)
1	19.97
2	29.00
3	25.28
4	22.79
5	24.88
6	42.12
7	18.19
8	22.62
9	21.81
10	15.84

- (●) 36.43
- ( ) 51.72
- ( ) 87.28
- ( ) 50.56

Question 7

1 / 1 pts

A rectangular flammable liquids storage room has a 14 ft ceiling and a floor that is 10 ft by 12 ft. Determine the volumetric flow rate of air in cfm necessary to ventilation the room in compliance with NFPA 30 (2015) 18.6.5.

- (●) 150
- ( ) 168
- ( ) 120
- ( ) Not enough information to calculate

Question 8

1 / 1 pts

If an 8hr TWA exposure is 155 ppm for a chemical with a PEL of 200ppm and the sampling and analytical method used has a SAE of 12.7%, what is the upper confidence limit of this sample?

- (●) 90.2%
- ( ) 77.5%
- ( ) 129%
- ( ) 64.8%

Question 9

1 / 1 pts

Assuming the air monitoring data in the table below is log-normally distributed, calculate the geometric mean.

Sample	TWA (8hr)
1	19.97
2	29.00
3	25.28
4	22.79
5	24.88
6	42.12
7	18.19
8	22.62
9	21.81
10	15.84

- ( ) 3.93

- 23.42
- 24.25
- 33.25

Question 10

1 / 1 pts

If the air temperature is 20 ˚C and the moisture content is 40 %RH, what is the absolute humidity in ppm given that the vapor pressure of water at 20 ˚C is 2,338 Pa?

- 9,231
- 6,913
- Not enough information to calculate
- 9.231

Question 11

1 / 1 pts

Personal exposure monitoring for an employee gives a result of 27 ppm as an 8hr TWA. If the PEL is 25ppm and the SAE for the sampling and analytical method is +/-9.5%, how would you classify this exposure with respect to OSHA compliance?

- Possible Violation
- No Violation
- Violation

Question 12

1 / 1 pts

Assuming the air monitoring data in the table below is log-normally distributed, calculate the geometric standard deviation.

Sample	TWA (8hr)
1	19.97
2	29.00
3	25.28
4	22.79
5	24.88
6	42.12
7	18.19
8	22.62
9	21.81
10	15.84

- (●) 1.308
- ( ) 1.290
- ( ) 1.370
- ( ) 6.581

Quiz Score: **11** out of 12