

Lab 6 - Direct Reading Instruments

Due Sep 27 at 7am

Points 10

Questions 10

Time Limit None

Attempt History

	Attempt	Time	Score
LATEST	Attempt 1	35 minutes	10 out of 10

! Correct answers are hidden.

Score for this quiz: **10** out of 10

Submitted Sep 26 at 12:44pm

This attempt took 35 minutes.

Question 1

1 / 1 pts

Nearly all vapors generated from chemical liquids have a vapor density _____.

- ☒ greater than air
- ☐ less than air
- ☐ neutrally buoyant with air

Question 2

1 / 1 pts

If a combustible gas meter reads less than zero, what should you assume about the concentration of flammable vapors in the environment?

- ☐ The concentration is <UEL

- ☐ The instrument needs to be replaced
- ☐ The instrument needs calibration
- ☒ The concentration is >UEL

Question 3

1 / 1 pts

When using a RAE Systems instrument equipped with an LEL sensor calibrated with methane, you measure an atmosphere containing gasoline. If the reading on the instrument is 2.5%, what is the actual %LEL of gasoline in the air?

- ☐ 8%
- ☒ 6.5%
- ☐ 0.96%
- ☐ 3.25%
- ☐ 12.25%

Question 4

1 / 1 pts

Given the background oxygen concentration in air is 20.95%, if the concentration of a chemical in air is 8,500 ppm, what would you expect the oxygen concentration to read on an instrument?

- ☐ 12.45%
- ☒ 20.77%
- ☐ Insufficient data to calculate

☐ 1.245%

Question 5

1 / 1 pts

Exposing a gas sensor to the gas it is designed to measure to see if the sensor responds is known as a _____?

☐ Drop Test

☒ Bump Test

☐ Calibration

☐ Poisoning

Question 6

1 / 1 pts

Exposing a gas sensor to a known concentration of the gas it is designed to measure in order to set the span value is known as _____?

☐ Poisoning

☐ Drop Test

☒ Field Calibration

☐ Bump Test

Question 7

1 / 1 pts

What term describes the phenomenon where an electrochemical sensor in a 4-gas meter responds to a chemical for which it is not designed to respond, and that material chemically bonds to the sensor reagent material causing a spurious response that may last for several hours after the meter is not longer in an environment with that chemical is know as?

- ☒ Poisoning
- ☐ Toxic Shock Syndrome
- ☐ Cross Sensitivity
- ☐ Thermal runaway

Question 8

1 / 1 pts

If an LEL sensor calibrated with methane is reading 1.5% LEL when measuring benzene vapors (CF 2.1), what is the actual concentration of benzene in ppm if the LEL of benzene is 2%?

- ☐ Not enough information to determine
- ☐ 0.063
- ☒ 630
- ☐ 3.15

Question 9

1 / 1 pts

All of the following are advantages of colorimetric tubes except:

- ☐ They are inexpensive
- ☐ Do not require calibration
- ☒ High precision readings
- ☐ Do not require batteries

Question 10

1 / 1 pts

When measuring the airborne concentration of Ethylbenzene with a PID equipped with a 10.6 eV lamp, the meter displays a value of 126 ppm. Using the correction factor found in the Honeywell Technical Note TN-106 - A guideline for PID instrument response, what is the actual concentration of Ethylbenzene in ppm?

- ☐ 268
- ☐ 46
- ☐ 64
- ☒ 59
- ☐ 247

Quiz Score: **10** out of 10