

## 2023 Governors Cup Mine Rescue Contest Technician Team Test

Name: \_\_\_\_\_ Team \_\_\_\_\_

Turn the instrument on by pressing and holding the center [Enter] navigation button on the \_\_\_\_\_ front of the instrument for at least 3 seconds.

Upper

Middle

Lower

Accumulations of hydrogen in the mine atmosphere are dangerous

because hydrogen:

is highly toxic.

is highly soluble in water.

is highly explosive.

BATTERY STATUS – Under the main menu [\_\_\_\_\_] option, select [BATTERY] to view the battery status.

CONFIGURE

DISPLAY

VIEW

When activated, instrument detects and measures concentration of carbon monoxide, methane, oxygen and nitrogen dioxide in the \_\_\_\_\_ air continuously and simultaneously.

Mine

Room

Ambient

In case of an alarm, the sensor(s) in alarm will be \_\_\_\_\_ on the display.

Highlighted

Flashing

Red

Carbon monoxide is:

a gas found in all mining operations

a normal constituent of air

detected during a mine fire or explosion

\_\_\_\_\_ - To scatter, spread out, or blend.

Disperse

Diffuse

Mix

Main fan – A mechanical ventilator installed at the surface which operates by either exhausting or blowing (pushing) to \_\_\_\_\_ airflow through the mine.

Create

Induce

Cause

Normal air contains approximately what percent oxygen?

15%

21%

31%

Two instruments commonly used to measure velocity of airflow in a mine are:

- Smoke tube and CO detector.
- Anemometer.
- Smoke tube and anemometer.

Two gases that are highly soluble in water are hydrogen sulfide and

- 
- Methane
  - Nitrogen dioxide
  - Sulfur dioxide

.A gas that is normally found near the roof or in high place in the mine is said to have a \_\_\_\_\_ specific gravity.

- High
- Middle
- Low

The most likely source of ethane, propane, or butane in a mine is:

- use of diesel equipment
- battery charging stations.
- leakage from adjacent gas or oil wells

Mine rescue teams should alter existing ventilation:

- Only when directed to do so by the Command Center.
- When the team captain decides to do so.
- When they encounter high concentrations of methane.

"Pogo sticks" are devices that are used:

To test the roof and rib.

To determine the direction of airflow.

As supports on which brattice cloth can be hung.