

**SOUTH-WESTERN WYOMING
MUTUAL AID
UNIFIED MINE RESCUE CONTEST
2021**

**WRITTEN TEST
MINE RESCUE
DAY 2**

TEAM: _____

WORKING TEAM MEMBER

NUMBER/POSITION: _____

TEAM NUMBER DRAWN, DAY 2: _____

CIRCLE THE LETTER/S THAT CORRESPOND WITH THE CORRECT ANSWER. NOTE: THERE MAY BE MORE THAN ONE CORRECT ANSWER.

- 1.) **ATMOSPHERIC PRESSURE AND TEMPERATURE ARE IMPORTANT FACTORS BECAUSE THEY:**
 - A. **AFFECT THE RATE OF DIFFUSION OF A GAS BY VENTILATION.**
 - B. **CAN CAUSE FALSE READINGS ON GAS DETECTION INSTRUMENTS.**
 - C. **LOWER OXYGEN CONTENT IN THE MINE.**

- 2.) **TWO GASES THAT ARE HIGHLY SOLUBLE IN WATER ARE:**
 - A. **HYDROGEN SULFIDE AND HYDROGEN**
 - B. **NITROGEN AND SULFUR DIOXIDE**
 - C. **HYDROGEN SULFIDE AND SULFUR DIOXIDE**

- 3.) **THE EXPLOSIVE RANGE OF METHANE/AIR MIXTURE (NORMALLY 5-15%) WILL CHANGE IF:**
 - A. **CERTAIN OTHER COMBUSTIBLE GASES ARE PRESENT.**
 - B. **COAL DUST IS SUSPENDED IN THE ATMOSPHERE.**
 - C. **THERE IS LESS THAN 12.1% OXYGEN IN THE ATMOSPHERE.**

- 4.) **WHICH OF THE FOLLOWING IS NOT TRUE OF SULFUR DIOXIDE?**
 - A. **IT IS EXPLOSIVE.**
 - B. **IT IS TOXIC.**
 - C. **IT CAN OCCUR DURING MINE FIRES.**

- 5.) **A GAS THAT IS NORMALLY FOUND NEAR THE ROOF OR IN HIGH PLACES IN THE MINE, IS SAID TO HAVE A LOW:**
 - A. **LEVEL OF TOXICITY.**
 - B. **LEVEL OF SOLUBILITY**
 - C. **SPECIFIC GRAVITY**

CIRCLE THE LETTER/S THAT CORRESPOND WITH THE CORRECT ANSWER. NOTE: THERE MAY BE MORE THAN ONE CORRECT ANSWER.

- 6.) A SMOKE TUBE IS A DEVICE USED TO:
 - A. DETERMINE OXYGEN CONTENT OF THE MINE ATMOSPHERE.
 - B. DETERMINE DIRECTION AND VELOCITY OF AIR FLOW.
 - C. DETECT LEAKS IN TEMPORARY STOPPINGS.

- 7.) MINE RESCUE TEAMS ERECTING TEMPORARY STOPPINGS/BULKHEADS IN ATMOSPHERE WITH ELEVATED METHANE READINGS SHOULD:
 - A. USE ONLY INFLATABLE SEALS.
 - B. MINE RESCUE TEAMS SHOULD NEVER ENTER SUCH ATMOSPHERE.
 - C. USE NON-SPARKING TOOLS, NAILS, AND SPADS.

- 8.) BAREFACED EXPLORATION SHOULD BE ATTEMPTED ONLY WHEN:
 - A. NO BREATHING APPARATUS IS AVAILABLE.
 - B. MINERS ARE TRAPPED IN THE MINE.
 - C. A BACKUP MINE RESCUE TEAM WITH APPARATUS IS IMMEDIATELY AVAILABLE.

- 9.) GAS READINGS SHOULD BE TAKEN:
 - A. AT ALL INTERSECTIONS.
 - B. AT ANY DEAD END OR FACE AREA.
 - C. AT THE FURTHEST POINT OF TRAVEL IN ANY ENTRY OR HEADING.

- 10.) DEBRIEFINGS ARE HELD TO:
 - A. INFORM NEWS REPORTERS OF DEVELOPMENTS.
 - B. INFORM FAMILY MEMBERS OF DEVELOPMENTS.
 - C. REVIEW THE RESCUE TEAM'S FINDINGS AFTER THEY HAVE RETURNED FROM UNDERGROUND.

CIRCLE THE LETTER/S THAT CORRESPOND WITH THE CORRECT ANSWER. NOTE: THERE MAY BE MORE THAN ONE CORRECT ANSWER.

- 11.) CLASS A FIRES ARE THOSE THAT INVOLVE:
- A. ORDINARY COMBUSTIBLE MATERIALS SUCH AS WOOD, PLASTICS, PAPER, AND CLOTH.
 - B. COMBUSTIBLE COOKING MEDIA SUCH AS OILS AND GREASE COMMONLY FOUND IN COMMERCIAL KITCHENS.
 - C. FLAMMABLE OR COMBUSTIBLE LIQUIDS SUCH AS GASOLINE, DIESEL, KEROSENE, AND GREASE.
- 12.) A MONOAMMONIUM PHOSPHATE EXTINGUISHER IS EFFECTIVE IN FIGHTING:
- A. CLASS A FIRES
 - B. CLASS B FIRES
 - C. CLASS C FIRES
- 13.) WHICH ONE OF THE FOLLOWING ACTIONS IS NOT A SUGGESTED PROCEDURE WHEN A TEAM LOCATES A BODY?
- A. OUTLINE THE BODY WITH CHALK OR PAINT ON THE FLOOR.
 - B. CLEAN UP THE AREA AROUND THE BODY FOR SAFETY AND EASE OF RECOVERY.
 - C. REPORT THE LOCATION TO THE COMMAND CENTER.
- 14.) A MINE RESCUE TEAM COULD REMOVE STANDING WATER FROM AN UNVENTILATED AREA.
- A. IF GAS CONDITIONS PERMIT, USING NON-CONDUCTIVE SUCTION LINE AND A PUMP SET UP IN FRESH AIR.
 - B. STANDING WATER CAN NOT BE PUMPED FROM AND UNVENTILATED AREA.
 - C. IF THE LINE LOSES SUCTION, TOXIC OR EXPLOSIVE GASES FROM THE CONTAMINATED ATMOSPHERE COULD NOT BE DRAWN OUT.
- 15.) PROBABLY THE BEST MATERIAL TO USE FOR SEALING A MINE FIRE IS:
- A. BRATTICE CLOTH
 - B. CEMENT BLOCKS
 - C. TONGUE-AND-GROOVE LUMBER

