

Technician Competition Rules

Second Biennial Collegiate MERD

General Procedures

- ✘ The technician competition will consist of a written examination and one field test.
- ✘ One technician team is permitted to compete per team.
- ✘ BG-4s, gas meters, testing equipment, and any other supplies necessary will be supplied.
- ✘ The most current service manuals for both the apparatus and specific gas meter will be referenced, and the competition will follow the procedures specified by the appropriate manufacturer.

Setup

- ✘ Each station will have a minimum of two judges, who have an advanced knowledge of the equipment being tested.
- ✘ The competition will be limited to a 40 minute time period.
- ✘ Teams will receive a briefing of the mine disaster and have to ask for appropriate equipment and ensure that all the necessary equipment is checked and ready for use.
- ✘ There will be three main portions in the field exercise:
 - BG-4s
 - Gas Instruments
 - Necessary team equipment

BG-4s

- ✘ Team will be provided with at least one fully assembled self-contained breathing apparatus, an apparatus tester, and all parts necessary to complete the problem.
- ✘ Only tools, apparatus, and testing equipment provided by the judge will be used
- ✘ Checks must be performed in order and recorded
- ✘ For completion, the spare breathing apparatus must be placed on the stretcher and the remaining five must be left in “ready-for-use” condition
- ✘ Each apparatus must undergo a “high pressure leak test”

Gas Instrument

- ✘ The multi-gas instrument give to the technician team may have multiple bugs or problems including:
 - Missing and/or needed sensors
 - Failed sensors

- Mis-calibrated sensors
- Dead or incorrect batteries
- Incorrect alarm and calibration points
- Missing parts
- ⊗ Team will be expected to evaluate the instrument, prepare all deficiencies, properly calibrate or functional test the instruments, and check for proper alarm points.
- ⊗ For completion, instruments must be fully assembled, operation, properly configured, and placed on stretcher.

Necessary Team Equipment

- ⊗ The technician team must also prepare and check any other equipment necessary for the exploration team to take underground.

Judging

- ⊗ Judging is based on the following criteria (in order of superiority):
 - Score Sheet
 - Time
- ⊗ The score sheet used for this competition will be from the 2012 Metal and Nonmetal National Mine Rescue Contest Rule Book
- ⊗ Timing is as follows
 - Clock starts once the briefing is complete
 - Clock stops when team captain says "Stop Clock"
- ⊗ Overall scoring:
 - Net score from combined field problem and written test scores
 - If there is a tie after the scores are summed, the time will be used as the tie breaker
 - If there remains a tie, team with the higher field score will win.