

Southeastern Central Kentucky Mine Rescue Contest

May 18th – 20th, 2010

Team Trainer Examination

- 1) A person trained in the use and care of breathing apparatus shall inspect and test the apparatus at intervals not exceeding 60 days and shall certify by signature and date the inspections and test were done?
- a) True
 - b) False

answer: b) False

source - 30 C.F.R. 49.6(b)(1)

- 2) The required minimum number and type of operational gas detectors that must be available to a MNM mine rescue team is?
- a) 2 equipped with CO, CO₂, O₂ and LEL
 - b) 4 equipped with CO, NO₂, O₂ and LEL
 - c) 2 electronic detectors and 2 Dragers equipped with CO, NO, O₂ and Methane
 - d) 4 detectors capable of testing for each gas that may be encountered

answer: d)

source - 30 C.F.R. 49.6 (a)(6)

- 3) Upon completion of the initial training, all mine rescue team members shall receive at least 24 hours of refresher training annually?
- a) True
 - b) False

answer: b) False

source - 30 C.F.R. 49.8(b)

- 4) Team checks accomplish the following?
- a) To make sure each team member is fit and ready to continue, to make sure each team member's apparatus is functioning properly, and to give the team a chance to rest.
 - b) To coordinate with the command center to relay updated information on the progress, and be informed of the progress of other teams that are underground.
 - c) To find out the O₂ pressure of each team members apparatus, and confer with the fresh air base on the best options to continue systematic exploration.

d) Both A and B

answer: a)

source MSHA 3027 Mine Rescue Team Training page 4-20 (2008 edition)

5) Effects of toxic gas depend on:

- a) Concentration
- b) Age of person
- c) Toxicity
- d) Length of exposure
- e) All of the above
- f) A, C & D

answer : f)

source - MSHA 3027 Mine Rescue Team Training p. 2-43 (2008 edition)

6) Systematic exploration requires a team to tie all crosscuts together before advancing (the 2 + 3 rule) mainly to?

- a) Insure the accuracy of a team's map.
- b) Prevent a team from advancing past areas where survivors could have sought refuge.
- c) Prevent a team from advancing forward of an unexplored area.
- d) b & c.

answer: c)

source - MSHA 3027 Mine Rescue Team Training page 4-24 (2008 edition)

7) The Fresh Air Base.....

- a) Is usually established at the point where conditions no longer permit bareface exploration.
- b) Is the base of operations from which rescue and recovery work advances into irrespirable atmospheres.
- c) Also functions as a base of communications for the operation linking the team, the command center, and all support personnel.
- d) A & B
- e) A , B & C

answer: e

source - MSHA 3027 Mine Rescue Team Training page 4-6 & 4-7(2008 edition)

8) How many bones are in the adult body?

- a) 204
- b) 206
- c) 205
- d) 201

answer: b) 206

source – Brady “First Responder” page 74 (8th edition)

9) The specific gravity of Carbon Dioxide (CO₂) is?

- a) 0.9672
- b) 1.5291
- c) 0.9674
- d) 1.1054

answer: b)

source - MSHA 3027 Mine Rescue Team Training page 2-14 (2008 edition)

10) Mine rescue team signals; one- advance, two – stop, three-retreat, four – distress/emergency

- a) true
- b) false

answer: b) false

source - MSHA 3027 Mine Rescue Team Training page 4-43 (2008 edition)

11) When performing a one-rescuer drag, you should always drag the patient....?

- a) Arms first
- b) Sideways
- c) Lengthwise
- d) Feet first
- e) None of the above

answer: c) lengthwise

source – Brady “First Responder” page 86 (8th edition)

12) In a MNM mine rescue contest, when smoke or gas is encountered in an opening, it will be considered to extend to the next required gas check location.

- a) True
- b) False

answer: False

source - 2010 MNM Nat'l Contest Rules p. 15

13) Mine rescue stations shall be no more than ____ hours ground travel to the mines they are associated with?

- a) 1 hour
- b) 2 hours
- c) 4 hours
- d) 8 hours

answer: b) 2 hours

source - 30 C.F.R. 49.2(f)

14) After a team attempts to make a change such as pumping water, extinguishing a fire or making a ventilation change, how long should the team wait to see if the placards change in order to determine if their change was effective?

- a) 10 seconds
- b) 15 seconds
- c) 30 seconds
- d) 1 minute

answer: b) 15 seconds

source - 2010 MNM Nat'l Contest Rules p. 15

15) When working a MNM mine rescue contest field problem, a team must demonstrate proficiency in gas testing at strategic locations. The gases that will be tested are?

- a) O₂, CO₂, NO₂, LEL
- b) O₂, CH₄, CO, NO₂
- c) CO, LEL, CO₂, O₂
- d) O₂, LEL, CO₂, NO₂

answer: b)

source - 2010 MNM Nat'l Contest Rules p. 26-27

- 16) When raises, winzes or boreholes are in the problem, the placard identifying them will indicate....?
- a) the airflow direction moving through them.
 - b) whether they go up and/or down from the level being worked.
 - c) the diameter and length and/or dimensions.
 - d) all of the above.

answer: b)

source - 2010 MNM Nat'l Contest Rules p. 16

- 17) In a MNM mine rescue contest, a briefing session is?
- a) Held when teams return to the surface after completing an assignment to review what they saw and did.
 - b) Held before a team goes underground to inform team members of conditions underground and give them their work assignments.

Answer: b)

source - 2010 MNM Nat'l Contest Rules p. 97

- 18) Reestablishing ventilation after a fire or explosion and bringing fresh air to an area damaged by fire or explosion is the main task of mine rescue teams in...?
- a) An exploration effort.
 - b) Assessing conditions and rescuing miners.
 - c) A recovery effort.
 - d) Both a & c

answer: c)

source - MSHA 3027 Mine Rescue Team Training p. 7-4 (2008 edition)

- 19) Increased temperature can cause mine gases to?
- a) Expand and diffuse more quickly
 - b) Contract and diffuse less quickly
 - c) Contract and diffuse more quickly
 - d) Expand and diffuse less quickly

answer: a)

source - MSHA 3027 Mine Rescue Team Training pages 2-5 and 2-6 (2008 edition)

- 20) Sulfur dioxide and hydrogen sulfide are examples of water-soluble gases, meaning they can be released from water?

- a) True
- b) False

answer: a) true

source - MSHA 3027 Mine Rescue Team Training page 2-7 (2008 edition)

- 21) Light gases such as hydrogen diffuse more quickly than heavy gases like sulfur dioxide
- a) True
 - b) False

answer: a) True

source - MSHA 3027 Mine Rescue Team Training page 2-7 (2008 edition)

- 22) When a team goes into a mine to explore or fight a fire, it should be concerned with?
- a) Spreading of the fire
 - b) the possibility of an explosion
 - c) both a & b

answer: c) Both

source - MSHA 3027 Mine Rescue Team Training page 5-13 (2008 edition)

- 23) The gases present in a mine following a disaster will vary according to....?
- a) The type of mine
 - b) The disaster situation
 - c) The type of equipment used in the mine
 - d) All of the above

answer: d) all

source - MSHA 3027 Mine Rescue Team Training page 2-12 (2008 edition)

- 24) The explosive range of carbon monoxide (CO) is?
- a) 4.0 to 74.2%
 - b) 5 to 15%
 - c) 12.5 to 74.2%
 - d) 3.0 to 12.5%

answer: c)

source - MSHA 3027 Mine Rescue Team Training page 2-28 (2008 edition)

- 25) Afterdamp consists of the following gases that are toxic, explosive and can be oxygen-deficient?
- a) Carbon dioxide, nitrogen, and air.
 - b) Carbon monoxide, carbon dioxide, methane, oxygen, nitrogen, and hydrogen.
 - c) Carbon monoxide, hydrogen sulfide, nitrogen, and air.

answer: b)

source - MSHA 3027 Mine Rescue Team Training page 2-29 (2008 edition)

- 26) The map person and fresh air base attendant must use the standardized map legend provided in the M/NM National Mine Rescue Contest Rules Book?
- a) True
 - b) False

answer: a)

source - 2010 MNM Nat'l Contest Rules p. 25

- 27) After a team has completed its 50 foot check, they will not be allowed to physically compare the team map with the fresh air base map??
- a) True
 - b) False

answer: a) True

source - 2010 MNM Nat'l Contest Rules p. 25

- 28) The Technician Team will consist of three members of the 8-person mine rescue team?
- a) True
 - b) False

answer: b) False

source - 2010 MNM Nat'l Contest Rules p. 49

29) Where crosscuts are blocked, no team member may advance more than three feet beyond the second intersection before tying across and/or behind into all unexplored areas that intersect?

- a) True
- b) False

answer: a) True

source - 2010 MNM Nat'l Contest Rules p. 23

30) Regulating airflow to control a fire is considered a ventilation change?

- a) True
- b) False

answer: b) False

source - 2010 MNM Nat'l Contest Rules p. 26