**COLORADO MINE RESCUE CONTEST**

**GOLDEN, CO**

**MAY 20-22, 2014**

**MINE RESCUE WRITTEN TEST**

Name:

Team:

1. The rescue team stationed at the FAB while another team is exploring is called:

1. Backup team
2. Standby team
3. Resting team
4. Secondary team

2. The team is under the direct supervision of:

1. The Mine Manager
2. Incident Command
3. The Briefing Officer
4. The Captain

3. Which of the following gases could be released when pumping water?

1. Hydrogen sulfide
2. Sulfur dioxide
3. Radon
4. All of the above

4. What is the largest component of normal air?

1. Nitrogen
2. Oxygen
3. Nitrogen dioxide
4. Argon

5. Which of the following are one of the four main causes of oxygen deficiency in the mine air?

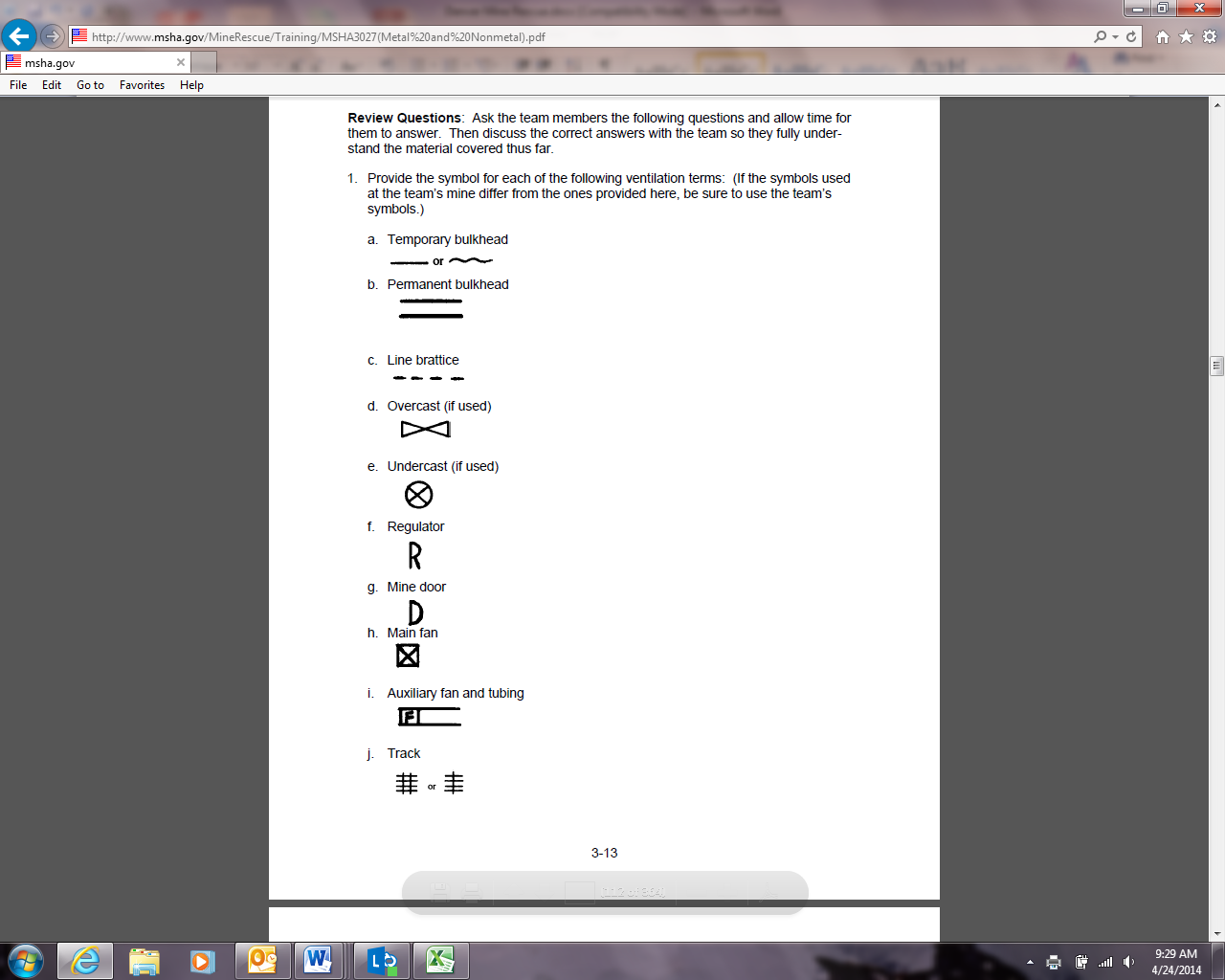
1. Consumption of oxygen by animals
2. Adequate ventilation
3. Displacement of oxygen by other gases
4. None of the above

6. High concentrations of carbon dioxide may produce an acid taste.

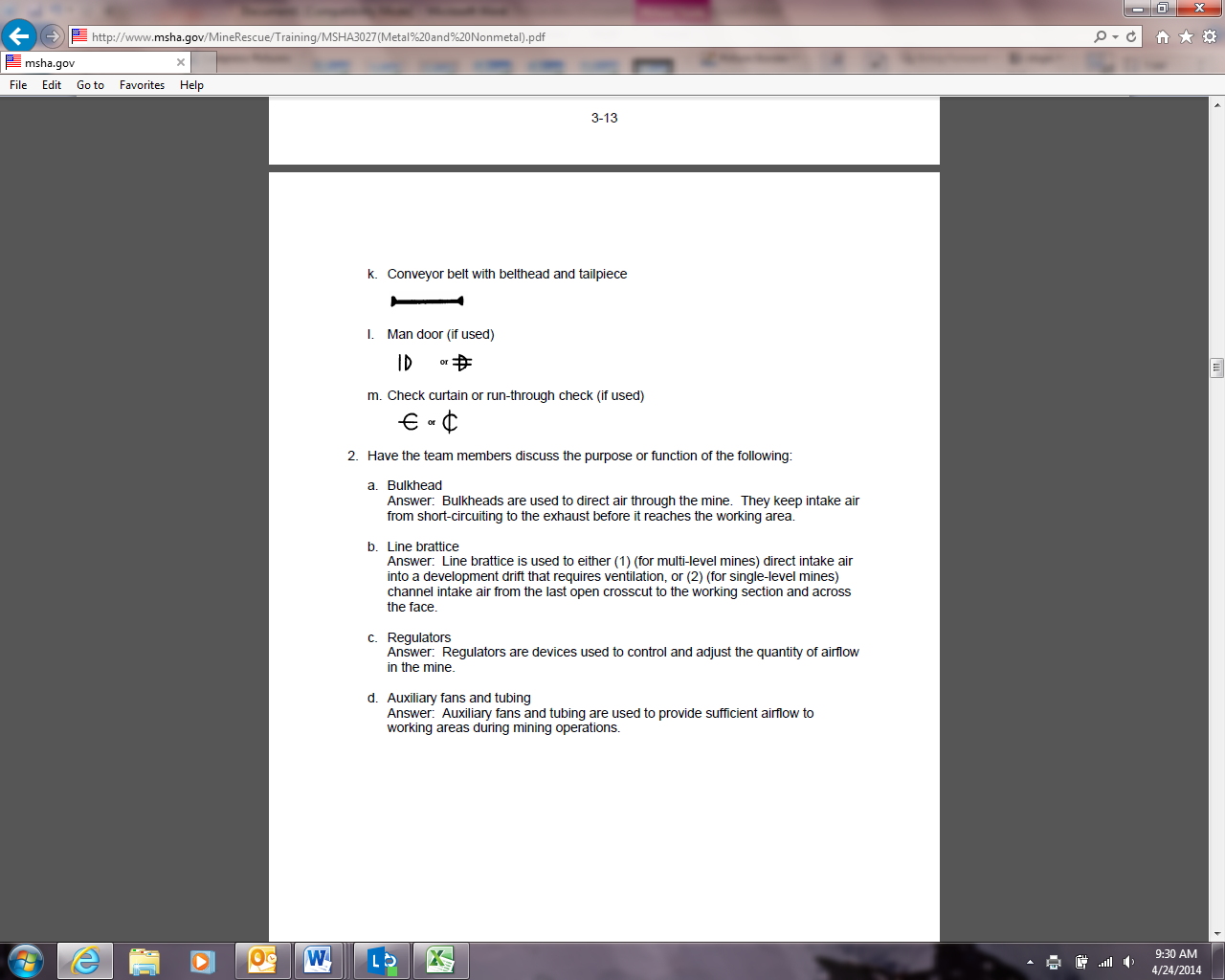
1. True
2. False

7. Which of the following is an explosive gas?

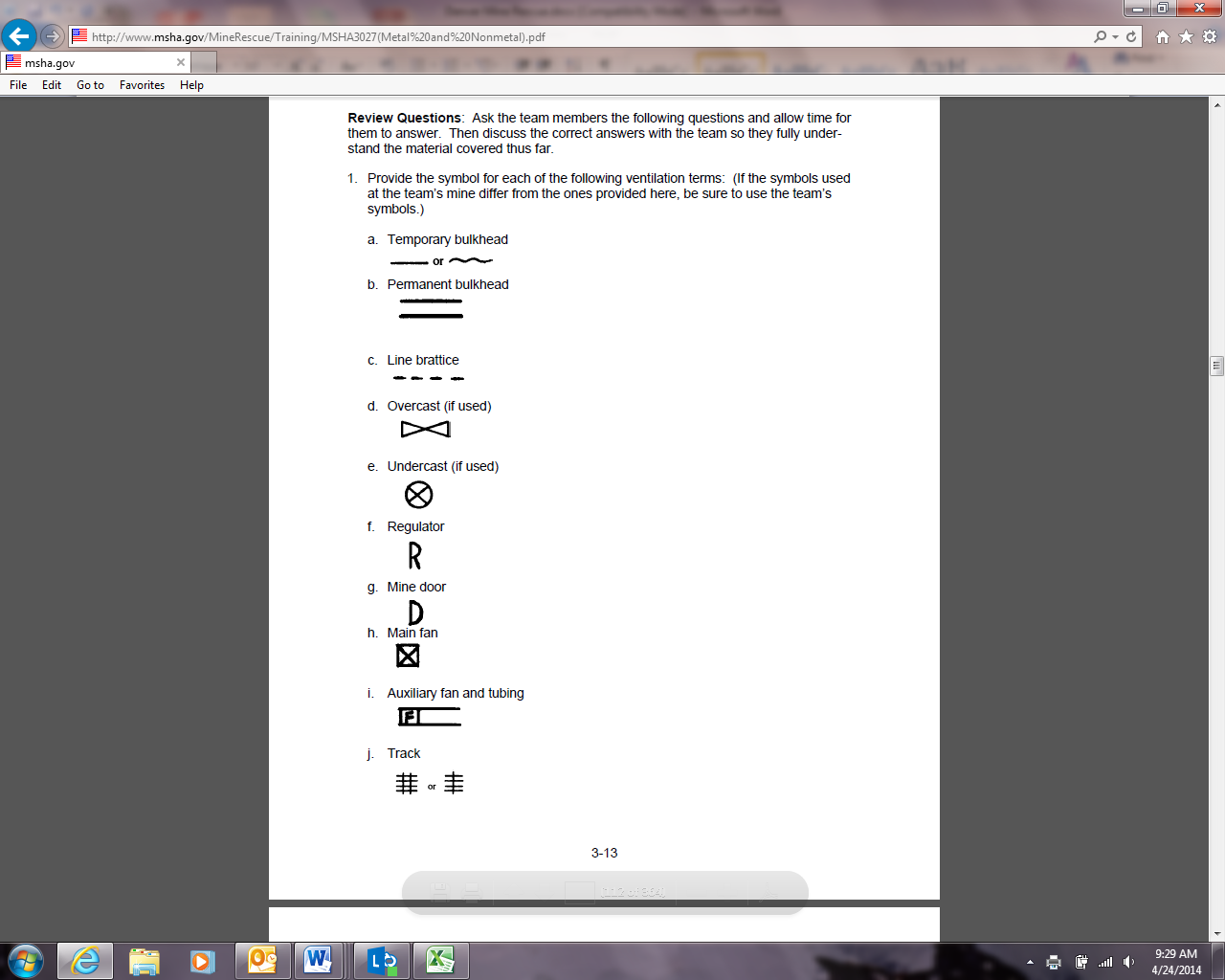
1. Oxygen
2. Carbon dioxide
3. Nitrogen dioxide
4. Carbon monoxide

8.  is the map symbol for:

1. Line brattice
2. Temporary bulkhead
3. Water line
4. Air line

9. is the map symbol for:

1. Line brattice
2. Check curtain
3. Open air valve
4. Closed air valve

10. is the map symbol for:

1. Main fan
2. Auxiliary fan
3. Overcast
4. Undercast

11. Which of the following are responsibilities of the Fresh Air Base:

1. Maintaining communications with the working rescue team and the command center
2. Following the team’s progress on the mine map and marking findings on the map as the team reports them
3. Coordinating and overseeing the activities of all personnel who are at the fresh air base, including the advisory committee
4. All of the above

12. A survivor with second degree burns on 25% of his body would be classified as:

1. First Priority
2. Second Priority
3. Third Priority
4. Immediate Priority

13. A survivor with spinal injuries, second degree burns over 5% of his body, multiple lacerations and multiple fractures would be classified as:

1. First Priority
2. Second Priority
3. Third Priority
4. Delayed Priority

14. During a rescue and recovery, the mine superintendent must be ready to obtain gas samples from the main return.

1. True
2. False

15. Having good security at the mine is important in order to:

1. Keep roads closed
2. Ensure that bystanders do not help in the recovery
3. Ensure that the press does not publish negative stories about the mining industry
4. Ensure that bystanders are not injured while on mine property

16. Which of the following is true?

1. An increase in temperature and pressure causes a gas to expand
2. A decrease in temperature causes a gas to expand
3. An increase in pressure causes a gas to contract
4. All of the above

17. A rise in barometric pressure causes a gas to diffuse more slowly.

1. True
2. False

18. What is the minimum percentage of oxygen needed to combust a 5% methane and oxygen mixture?

1. 19.2%
2. 10%
3. 12.1%
4. Any amount

19. Which of the following are health hazards associated with hydrogen sulfide:

1. Inflammation of the eyes and respiratory tract
2. Exposure can lead to bronchitis or pneumonia
3. Both a and b.
4. There are none associated

20. Small concentrations of heavy hydrocarbons are often detected:

1. During welding
2. After mine fires
3. When breaching into stagnant water
4. While charging batteries

21. When is it appropriate to alter ventilation during exploration?

1. Whenever a contaminant is detected
2. Whenever a bulkhead is found damaged
3. Whenever the team captain determines
4. Only with orders from the command center

22. Stopping is another word for:

1. Bulkhead
2. Line brattice
3. Check curtain
4. Undercast

23. Quantity of air is determined by multiplying velocity by velocity and then by the cross-sectional area of where the measurement was taken.

1. True
2. False

24. A common hazard of traveling in smoke is spatial disorientation.

1. True
2. False

25. When traveling in heavy smoke where visibility is nearly zero, fresh material on the floor could indicate bad back or sides.

1. True
2. False

26. What type of fire is an electrical fire?

1. Class A
2. Class B
3. Class C
4. Class D

27. Only solid stream nozzles should be used to fight fires with water.

1. True
2. False

28. Rigor Mortis occurs faster in obese persons than in muscular persons.

1. True
2. False

29. The common method for reestablishing ventilation in multi-level mines is:

1. Direct ventilation
2. Progressive ventilation
3. Rapid ventilation
4. None of the above

30. Airlock operations should always begin on the exhaust side of the fire.

1. True
2. False