

## 2013 Preshift Examination Statements Questions and Answers

1. A preshift examiner must be certified or \_\_\_\_\_ in the State in which the coal mine is located.
  - a) approved
  - b) licensed
  - c) registered\*
  - d) tested
2. Preshift examinations must be conducted within \_\_\_\_\_ preceding the beginning of any \_\_\_\_\_ interval during which any person is scheduled to work or travel underground.
  - a) 4 hours, 12-hour
  - b) 3 hours, 12-hour
  - c) 3 hours, 8-hour\*
  - d) 4 hours, 8-hour
3. The lower explosive limit for \_\_\_\_\_ is 5 volume percent.
  - a) hydrogen
  - b) carbon monoxide
  - c) methane\*
  - d) nitrogen
4. Air being used to ventilate areas where persons work or travel shall contain at least \_\_\_\_\_ percent oxygen.
  - a) 20.8
  - b) 19.5\*
  - c) 21
  - d) 17
5. Ventilation is utilized to dilute, render harmless and carry away flammable, explosive, \_\_\_\_\_, and harmful gases, dusts, smoke, and fumes.
  - a) toxic
  - b) deadly
  - c) noxious\*
  - d) pungent

6. When taking a reading with a(n) \_\_\_\_\_, a commonly used method is to traverse the airway.
- a) smoke tube
  - b) anemometer\*
  - c) pitot tube
  - d) gas detector
7. Low barometric pressures may cause methane to migrate outward from working sections into pillared areas.
- a) True
  - b) False\*
8. About \_\_\_\_\_ of normal air is oxygen.
- a) 78 percent
  - b) 20.8 percent
  - c) 19.5 percent
  - d) 21 percent\*
9. Where the mining height permits and the visual examination does not disclose a dangerous condition, sound and vibration tests, or other equivalent tests, shall be made where supports are to be installed.
- a) True
  - b) False\*
10. \_\_\_\_\_ is lighter than air.
- a) Carbon Dioxide
  - b) Oxygen
  - c) Methane\*
  - d) Nitric Oxide
11. To test for \_\_\_\_\_, use a \_\_\_\_\_ detector or chemical analysis.
- a) hydrogen, hydrogen
  - b) nitrogen dioxide, nitrogen dioxide
  - c) oxygen, oxygen
  - d) methane, methane\*

12. Low voltage up to and including 660 volts, medium voltage 661 volts to 1,200 volts; and high voltage means more than 1,200 volts.

- a) True
- b) False\*

13. The upper explosive limit for \_\_\_\_\_ is 15 volume percent.

- a) methane\*
- b) hydrogen
- c) hydrogen sulfide
- d) carbon monoxide

14. Methane detectors should be calibrated with a known methane-air mixture at least once every \_\_\_\_\_.

- a) 31 days\*
- b) 30 days
- c) month
- d) week

15. Each underground coal mine operator shall ensure that at least \_\_\_\_\_ in each working section on each production shift are proficient in the use of all fire suppression equipment available on such working section, and know the location of such fire suppression equipment.

- a) 2 miners\*
- b) 2 employees
- c) 2 workers
- d) 2 persons

16. \_\_\_\_\_ has no taste or odor.

- a) Carbon Dioxide
- b) Normal Air
- c) Carbon Monoxide\*
- d) Acetylene

17. Tests for methane concentration should be made at least \_\_\_\_\_ from the roof, face, ribs, and floor.
- a) 24 inches
  - b) 18 inches
  - c) 12 inches\*
  - d) 6 inches
18. The end of temporary roof support shall be posted with a readily visible warning, or a physical barrier shall be installed to impede travel beyond permanent support.
- a) True
  - b) False\*
19. Roof support materials, sequence of roof support installation and spacing, are stated in the \_\_\_\_\_.
- a) mining law
  - b) federal register
  - c) approved roof control plan\*
  - d) approved ventilation plan
20. All electric face equipment taken into or used in by the last open crosscut shall be \_\_\_\_\_.
- a) preshifted
  - b) permissible\*
  - c) rockdusted
  - d) disconnected
21. Escapeways shall be clearly marked to show the route and direction of travel to \_\_\_\_\_.
- a) fresh air
  - b) the surface\*
  - c) refuge alternatives
  - d) the main haulageway

22. No person other than \_\_\_\_\_ may enter or remain in any underground area unless a preshift examination has been completed for the established 8-hour interval.
- a) qualified examiners
  - b) certified examiners\*
  - c) certified officials
  - d) approved examiners
23. Ventilation controls are used underground to properly distribute air to all \_\_\_\_\_ of the mine.
- a) areas
  - b) portions
  - c) parts
  - d) sections\*
24. Tests for oxygen deficiency shall be made by a qualified person with MSHA approved oxygen detectors maintained in permissible and proper operating condition.
- a) True\*
  - b) False
25. The maximum 8 hour exposure level for carbon monoxide is \_\_\_\_\_.
- a) 5 ppm
  - b) 35 ppm
  - c) 50 ppm\*
  - d) 80 ppm
26. The minimum last open crosscut air requirements also applies to sections which are not operating but are capable of producing coal by simply \_\_\_\_\_ the equipment on the section.
- a) moving
  - b) energizing\*
  - c) starting
  - d) examining

27. Lubricating oil and grease kept underground shall be stored in fireproof, \_\_\_\_\_ metal containers.

- a) locked
- b) clean
- c) closed\*
- d) secure

28. The results of the preshift examination must be recorded in a book, provided for that purpose on the surface, before any persons other than the certified persons may enter any underground areas.

- a) True\*
- b) False

29. All fire suppression devices shall be visually inspected at least once \_\_\_\_\_ by a person qualified to make such inspections.

- a) each 30 days
- b) each week\*
- c) each 31 days
- d) each 6 months

30. Preshift examinations are made by persons designated by the operator.

- a) approved
- b) employed
- c) designated\*
- d) assigned

31. A bar for taking down loose material shall be available in the working place or on all face equipment except haulage equipment.

- a) haulage\*
- b) spare
- c) permissible
- d) diesel

32. The operator must establish \_\_\_\_\_ of time subject to the required preshift examinations.

- a) 3-hour intervals
- b) 8-hour intervals\*
- c) 6-hour intervals
- d) 10-hour intervals

33. In exhausting face ventilation systems, a mean entry velocity of at least \_\_\_\_\_ feet per minute will reach each working face where coal is being cut mined or loaded.
- a) 120
  - b) 60\*
  - c) 80
  - d) 100
34. Test holes, spaced at intervals specified in the roof control plan, shall be drilled to a depth at least \_\_\_\_\_ above the anchorage horizon of mechanically anchored tensioned roof bolts being used.
- a) 36 inches
  - b) 6 inches
  - c) 30 inches
  - d) 12 inches\*
35. Before implementing an approved revision to a roof control plan, all persons who are affected by the revision shall be instructed in its provisions.
- a) trained
  - b) certified
  - c) instructed\*
  - d) qualified
36. A minimum quantity of \_\_\_\_\_ cubic feet per minute shall reach each working face where coal is being cut, mined, drilled for blasting, or loaded.
- a) 9,000
  - b) 6,000
  - c) 3,000\*
  - d) 2,000
37. Self-contained self-rescuers are used to protect the wearer from the effects of \_\_\_\_\_.
- a) afterdamp
  - b) irrespirable atmosphere\*
  - c) foul mine air
  - d) noxious and toxic gases

38. The quantity of air reaching the last open crosscut of each set of entries or rooms on each working section and the quantity of air reaching the intake end of a pillar line shall be at least \_\_\_\_\_ cubic feet per minute unless a greater quantity is required to be specified in the approved ventilation plan.
- a) 9,000\*
  - b) 6,000
  - c) 3,000
  - d) 2,000
39. Rock dust applications to the roof, ribs, and floor shall be maintained to within \_\_\_\_\_ of the working face, except in those areas where the dust is too wet or too high in incombustible content.
- a) 100 feet
  - b) 50 feet
  - c) 40 feet\*
  - d) 25 feet
40. The results of preshift examinations may be called out to a responsible person on the surface, or carried to the surface by the \_\_\_\_\_.
- a) section foreman
  - b) mine forman
  - c) examiner\*
  - d) fire boss
41. Oxygen detectors shall be calibrated at the start of each week that the detectors will be used.
- a) True
  - b) False\*
42. Chemical extinguishers shall be examined every 6 months and the date of the examination shall be written on a permanent tag attached to the extinguisher.
- a) month
  - b) 2 months
  - c) 6 months\*
  - d) week

43. Conveyor belts used to transport persons during the oncoming shift must be examined during the \_\_\_\_\_.
- a) day
  - b) preshift examination\*
  - c) onshift examination
  - d) shift
44. High spots where methane is likely to accumulate, over haulageways where \_\_\_\_\_ will travel must be examined during the preshift examination.
- a) miners
  - b) employees
  - c) equipment\*
  - d) men and materials
45. Any area of the mine where a hazardous condition is observed shall be posted with a \_\_\_\_\_ danger sign where anyone entering the area would pass.
- a) permanent
  - b) physical
  - c) visible
  - d) conspicuous\*
46. \_\_\_\_\_ and the examiner's certification with date, time and initials, shall be made at seals located along intake air courses that ventilate working sections where anyone is scheduled to work during the oncoming shift.
- a) Methane tests\*
  - b) Gas tests
  - c) Air readings
  - d) Pressure tests
47. A visual examination of the roof, face and ribs shall be made immediately before any work \_\_\_\_\_ in an area and thereafter as conditions warrant.
- a) begins
  - b) commences
  - c) is started\*
  - d) is performed

48. Low barometric pressures may cause seals to leak the sealed atmosphere outward into adjacent airways.

- a) True\*
- b) False

49. Regulators are used in mine ventilation to regulate \_\_\_\_\_ to meet the individual needs of each air split.

- a) air velocity
- b) airflow\*
- c) air volume
- d) methane

50. A sightline or other method of directional control shall be used to maintain the projected direction of mining in entries, rooms, crosscuts and pillar splits.

- a) True\*
- b) False

51. The operator must maintain a \_\_\_\_\_ diameter barrier around oil and gas wells, unless a lesser barrier consistent with State laws and regulations is approved.

- a) 100 foot
- b) 200 foot
- c) 300 foot\*
- d) 500 foot

52. Persons underground shall use only permissible electric lamps approved by NIOSH.

- a) True
- b) False\*

53. A supply of first aid equipment shall be maintained in each working section not more than \_\_\_\_\_ outby the active working face or faces.

- a) 800 feet
- b) 500 feet\*
- c) 250 feet
- d) 200 feet

54. After each time a self-rescue device is worn or carried, the device shall be removed from service by a trained person.

- a) True
- b) False\*

55. If a mantrip or portal bus is used to enter or exit a mine it must have one additional, one hour SCSR, for each person who uses that transportation.

- a) True
- b) False\*

56. Damaged rollers or other damaged belt conveyor components, which pose a fire hazard must be immediately \_\_\_\_\_.

- a) repaired or replaced\*
- b) reported
- c) discarded
- d) taken out of service

57. The mine emergency evacuation and firefighting program is required to instruct all miners in the use, care and maintenance of \_\_\_\_\_.

- a) refuge alternatives
- b) self-rescue devices\*
- c) self-contained breathing devices
- d) methane detectors

58. The mine emergency evacuation and firefighting program requires a review of the \_\_\_\_\_, the escapeway system, and location of refuge alternatives.

- a) ventilation plan
- b) mine map\*
- c) roof control plan
- d) evacuation plan

59. Prior to assuming duties on a section or outby work location, a \_\_\_\_\_ shall travel both escapeways in their entirety.

- a) mine official
- b) foreman\*
- c) preshift examiner
- d) miner

60. Each quarterly evacuation training and drill shall include recognizing when the SCSR is not functioning properly and demonstrating how to initiate and reinitiate the starting sequence.

- a) True\*
- b) False

61. An escapeway map shall show the \_\_\_\_\_ escapeway from the working section or the miner's work station to the surface or the exits at the bottom of the shaft or slope, refuge alternatives, and SCSR storage locations.

- a) primary
- b) designated\*
- c) seconday
- d) appropriate

62. The escapeway map shall be posted or readily accessible for all miners at the following locations; in the working section, where continuous mining equipment is being installed or removed, at the refuge alternative and at a surface location of the mine where miners congregate.

- a) True\*
- b) False

63. \_\_\_\_\_ shall be located within 1,000 feet from the nearest working face and from the locations where mechanized mining equipment is being installed or removed.

- a) Refuge chambers
- b) Refuge alternatives\*
- c) First Aid stations
- d) Load centers

64. At all times, the site and area around the refuge alternative shall be kept clear of machinery, materials and obstructions.

- a) first aid station
- b) refuge alternative\*
- c) load center
- d) dinner hole

65. Telephones or equivalent two way communication facilities shall be located not more than \_\_\_\_\_ feet outby the last open crosscut and not more than \_\_\_\_\_ feet from the farthest point of penetration of the working places on a working section.
- a) 300, 500
  - b) 250, 500
  - c) 500, 800\*
  - d) 200, 500
66. Belt conveyors that do not transport men should have start and stop controls installed at intervals not to exceed \_\_\_\_\_.
- a) 250 feet
  - b) 800 feet
  - c) 500 feet
  - d) 1,000 feet\*
67. Track haulage roads should have a continuous clearance on one side of at least \_\_\_\_\_ from the farthest projection of normal traffic.
- a) 12 inches
  - b) 18 inches
  - c) 24 inches\*
  - d) 36 inches
68. The clearance space on all track haulage roads should be kept free of loose coal, supplies and other loose materials.
- a) True
  - b) False\*
69. Track haulage roadways should be maintained as free as practicable from bottom irregularities, debris, and wet or muddy conditions.
- a) True
  - b) False\*
70. Only permissible explosives, approved sheathed detonating devices, and permissible blasting units shall be used underground.
- a) True
  - b) False\*

71. All underground explosives magazines shall be located at least \_\_\_\_\_ from roadways and any source of electric current.
- a) 40 feet
  - b) 25 feet\*
  - c) 50 feet
  - d) 100 feet
72. The map required by \_\_\_\_\_ shall be kept up to date by temporary notations.
- a) 75.1200\*
  - b) 75.300
  - c) 75.1400
  - d) 75.1000
73. Temporary notations shall include temporary and permanent ventilation controls constructed or removed, such as seals, overcasts, undercasts, regulators, and permanent stoppings, and the direction of air currents.
- a) True
  - b) False\*
74. Main mine fans shall be equipped with an automatic device that gives a signal when the \_\_\_\_\_.
- a) power is disrupted
  - b) fan slows or stops\*
  - c) shift ends
  - d) MSHA inspector is on the property
75. Each main mine fan shall be examined for proper operation by a \_\_\_\_\_ person \_\_\_\_\_ by the operator once each day unless a fan monitoring system is used.
- a) trained, designated\*
  - b) qualified, assigned
  - c) trained, employed
  - d) certified, employed

76. The weekly main mine fan examination is not required on any day when no one, including certified persons, goes underground. However, the main mine fan examination shall be completed prior to anyone entering the mine.

- a) True
- b) False\*

77. Permissible flame safety lamps may only be used as a supplementary testing device.

- a) True\*
- b) False

78. When 1 percent or more methane is present in a working place or return air course, except for intrinsically safe atmospheric monitoring system (AMS), electrically powered equipment in the affected area shall be deenergized, other mechanized equipment shall be shut off.

- a) True
- b) False\*

79. When \_\_\_\_\_ or more methane is present in a working place or intake air course, changes or adjustments shall be made at once to the ventilation system to reduce the concentration of methane to less than \_\_\_\_\_.

- a) percent, 1 percent
- b) 2 percent, 1 percent
- c) 1 percent, 1 percent\*
- d) 5 percent, 2 percent

80. When \_\_\_\_\_ or more methane is present in a working place or intake air course, no other work shall be permitted in the affected area until the methane concentration is less than \_\_\_\_\_.

- a) percent, 1 percent
- b) 1 percent, 1 percent\*
- c) 2 percent, 1 percent
- d) 5 percent, 2 percent

81. When auxiliary fans and tubing are used for face ventilation, each auxiliary fan shall be monitored or shut off when no one is present on the working section.

- a) True
- b) False\*

82. When an auxiliary fan is operating, line brattice or other face ventilation control devices shall be used to maintain ventilation to the working places.

- a) True
- b) False\*

83. When two or more sets of mining equipment are simultaneously engaged in cutting, mining, or loading coal or rock from working places within the same working section, each set of mining equipment shall be on a separate split of intake air.

- a) True\*
- b) False

84. The atmosphere in the sealed area is considered inert when the oxygen concentration is less than 10 percent or the methane concentration is less than \_\_\_\_\_ or more than 20.0 percent.

- a. percent
- b) 2 percent
- c) 3 percent\*
- d) 1 percent

85. Welding, cutting and soldering with an arc or flame are prohibited within 150 feet of a seal.

- a) 300 feet
- b) 250 feet
- c) 100 feet
- d) 150 feet\*

86. The person conducting the preshift examination shall examine for hazardous conditions, test for oxygen and methane accumulations, and determine if the air is moving in its proper direction.

- a) True
- b) False\*

87. The last open crosscut is the crosscut in the line of pillars containing the permanent stoppings that separate the intake escapeway and the return escapeway.
- a) True
  - b) False\*
88. The approved ventilation plan and any revisions shall be posted on the mine bulletin board within 1 working day following notification of approval.
- a) 10 days
  - b) 1 week
  - c) 1 working day\*
  - d) 3 working day
89. The mine ventilation plan shall show the location where the air quantity ventilating the working place must be greater than 9,000 cubic feet per minute when coal is being cut, mined, drilled for blasting or loaded.
- a) True
  - b) False\*
90. The mine ventilation plan shall show the quantity of air required in the last open crosscut if greater than 9,000 cubic feet per minute.
- a) 6,500
  - b) 9,000\*
  - c) 6,000
  - d) 3,000
91. The mine ventilation map shall show the velocity and direction of air flow in all underground areas of the mine.
- a) True
  - b) False\*
92. The mine ventilation map shall show the location of all escapeways and refuge alternatives.
- a) True\*
  - b) False

93. The directional lifeline shall be equipped with one directional indicator cone securely attached to the lifeline, signifying the route of escape, placed at intervals not exceeding 100 feet.
- a) 100 feet\*
  - b) 200 feet
  - c) 150 feet
  - d) 250 feet
94. The directional lifeline shall be equipped with two securely attached directional arrows, installed consecutively with the tapered section pointing inby, to signify an attached branch line.
- a) True
  - b) False\*
95. Boreholes shall be drilled in each working place when the working place approaches to within \_\_\_\_\_ of any mine workings of an adjacent mine located in the same coal bed unless the mine working have been preshifted.
- a) 1,000 feet
  - b) 500 feet
  - c) 250 feet
  - d) 200 feet\*
96. Where rock dust is to be applied it shall be maintained in such quantities that the incombustible content shall be not less than \_\_\_\_\_.
- a) 60 per centum
  - b) 80 per centum\*
  - c) 40 per centum
  - d) 65 per centum
97. All electrical connections or splices shall be mechanically and electrically suitable and efficient connectors shall be used.
- a) True
  - b) False\*
98. Power wires and cables, except trolley wires and trolley feeder wires, and bare signal wires shall be insulated adequately and permissible.
- a) True
  - b) False\*

99. All underground high-voltage transmission cables shall be guarded where men regularly work or pass under them unless they are \_\_\_\_\_ or more above the floor or rail.

- a) 6½ feet\*
- b) 6 feet
- c) 72 inches
- d) 36 inches

100. Circuit breakers shall be marked for identification.

- a) True\*
- b) False