

1. More than 90 percent of all asbestos used in the USA has been of the serpentine variety called:
 - a. amosite.
 - b. chrysotile
 - c. crocidolite
 - d. tremolite
2. What conclusion can be drawn if high levels of asbestos fibers are identified inside the work area during air monitoring?
 - a. The filter may be clogged.
 - b. Poor work practices may be indicated.
 - c. It will take longer to finish the job.
 - d. The building owner should purchase a larger machine.
3. What is a "Type C" respirator?
 - a. a supplied air respirator
 - b. a full face respirator
 - c. an air purifying respirator
 - d. a filter cartridge respirator
4. Which is not an advantage of phase contrast microscopy for fiber analysis?
 - a. It counts only asbestos fibers.
 - b. Sample collection is relatively simple.
 - c. Laboratory analysis is readily available and relatively inexpensive.
 - d. Procedures are standardized and a laboratory proficiency program exists.
5. Why are two layers of plastic sometimes used to seal off the walls of the work area?
 - a. to make clean up easier
 - b. to keep the humidity level
 - c. to insulate against the heat
 - d. to reduce noise in the work area
6. Containerized asbestos materials should be hauled to the disposal site in:
 - a. a dump truck.
 - b. a pick up truck.
 - c. an enclosed truck.
 - d. a flat bed trailer.

7. Why is air monitoring usually performed at the start of the project?
- a. to determine the type of asbestos
 - b. to determine if the building has asbestos
 - c. to determine if an encapsulant can be used
 - d. to determine the fiber levels outside the work area
8. What is the minimum thickness of plastic bags into which asbestos-containing materials are placed after removal?
- a. 0.6 mil
 - b. 1.0 mil
 - c. 6 mil
 - d. 10 mil
9. What is the best method for insuring that electrical panels will not become energized while work is being conducted?
- a. use panel lockouts
 - b. use extension cords
 - c. use fiberglass ladders
 - d. use circuit interrupters
10. Visual inspection at the end of the job should take place:
- a. from a pivot point in the room.
 - b. with a negative air machine running.
 - c. with the containerized debris in the area.
 - d. before the containment barriers are taken down.
11. What are the two main groups of asbestos?
- a. brown and blue
 - b. serpentine and talc
 - c. serpentine and amphibole
 - d. fibrous and non-fibrous
12. What name is given to the air sampling technique which involves physically agitating the abatement area to produce a "worst case" situation?
- a. passive sampling
 - b. aggressive sampling
 - c. time weighted sampling
 - d. high efficiency sampling

13. Which is true about asbestos?
- a. You can tell when asbestos is in insulation by looking at it.
 - b. Asbestos is positively identified by phase contrast microscopy.
 - c. Asbestos can harm you even if you cannot see it.
 - d. Asbestos is a man-made fiber.
14. Which of the following asbestos materials is least likely to be considered friable?
- a. cementitious wallboard and floor tiles
 - b. damaged pipe and boiler covering
 - c. fibrous, fluffy ceiling insulation
 - d. granular, cementitious ceiling insulation/plaster
15. What are the two groups into which asbestos-containing materials are commonly divided?
- a. wet and dry
 - b. friable and non-friable
 - c. fibrous and non-fibrous
 - d. non-fibrous and non-friable
16. Which of the following statements about negative air pressure is correct?
- a. Negative air pressure can be tested with smoke tubes.
 - b. Negative air pressure should be maintained 24 hours a day.
 - c. Negative air pressure prevents fibers from escaping outside the work area.
 - d. All of the above are correct.
17. How can amosite be described?
- a. Amosite is brown and brittle.
 - b. Amosite is blue and silky.
 - c. Amosite is white and silky.
 - d. Amosite is mixed in color.
18. Which factor most limits the degree of protection provided by a respirator?
- a. Fit of the facepiece
 - b. Type of approved filter
 - c. Type of approved cartridge
 - d. Brand of approved respirator

19. What colors are used for a high efficiency cartridge for a respirator suitable for an asbestos environment?
- a. yellow, green, or orange
 - b. purple, pink, or red
 - c. black, gray, or blue
 - d. white, cream, or gold
20. Which of the following is not an appropriate treatment for heat stress?
- a. removing the victim's clothing
 - b. laying the victim down
 - c. covering the victim with a blanket
 - d. moving the victim to a cooler area.
21. Which of the following statements concerned with medical aspects of asbestos removal is not correct?
- a. A pulmonary function test must be part of a medical exam.
 - b. Any person hired specifically for asbestos work must have a medical exam.
 - c. If an employee works for less than 30 days, she/he need not take a medical examination.
 - d. If a presently employed worker is found to not be able to wear a respirator, that employee must be reassigned to another job.
22. What protective devices should be worn while unloading the plastic bags of asbestos material at the disposal site (dump)?
- a. safety shoes and hard hats
 - b. respirator and safety glasses
 - c. hard hats and safety glasses
 - d. respirators and disposable coveralls
23. During which type of sampling activity is "aggressive sampling", (a relatively new air sampling technique) used?
- a. outdoor sampling
 - b. personal sampling
 - c. perimeter sampling
 - d. clearance sampling
24. Which of the following is normally not a problem when considering impurities in the operation of a Type C respirator?
- a. heat
 - b. water
 - c. carbon monoxide
 - d. asbestos fibers

25. Which of the following needs respiratory protection from asbestos fibers?
- a. asbestos workers
 - b. visitors to job site
 - c. maintenance workers
 - d. all of the above
26. According to OSHA, how often should an employee check the facepiece fit of his/her respirator?
- a. each time it is put on
 - b. each time it is repaired
 - c. when it is issued to him/her
 - d. once per day before starting
27. Which of the following respirators has the highest protection factor?
- a. air hat (PAPR)
 - b. full-face air supplied
 - c. half-mask purifying
 - d. full-face air purifying
28. Which of the following pre-work activities is not specifically required by OSHA standards for working on asbestos abatement contracts?
- a. providing medical exams for the employees
 - b. training employees to use the respirators
 - c. using a check list for tools and equipment
 - d. making provisions to remove asbestos material as wet as possible
29. What is a physician looking for when he/she conducts a pre-employment medical exam?
- a. calcium deposits, development of fibrotic lesions
 - b. evidence of heart problems, lung capacity volume
 - c. both a and b
 - d. need for annual examinations
30. At what stage in the completion of an asbestos abatement/control project should clearance ("clean air") monitoring be conducted?
- a. before final cleaning
 - b. during final cleaning
 - c. immediately after wet cleaning
 - d. after passing a thorough visual inspection

31. How should the adequacy of cleanup on an asbestos abatement job be determined?
- a. by visual inspection and air monitoring
 - b. by visual inspection and white glove test
 - c. by air monitoring and white glove test
 - d. by wipe sample and electron microscopy
32. Asbestos waste materials can be taken to the disposal site in lined and sealed fiber drums. Which of the following is also appropriate for transporting asbestos waste materials to the disposal site?
- a. cardboard boxes
 - b. standard leaf bags
 - c. 6 mil plastic bags
 - d. portable dumpsters
33. If enclosure is chosen as an abatement option, which of the following statements is true?
- a. It is the only permanent solution.
 - b. It is the least expensive method of control over time.
 - c. The building owner will not have to be concerned with that area in the future.
 - d. Records must be maintained to indicate the presence of asbestos inside the enclosure.
34. Which of the following wording is found on the labels required by OSHA for asbestos scrap and debris?
- a. Danger, Contains Asbestos Fibers
 - b. Warning, Cancer Causing Materials
 - c. Danger, Asbestos and Smoking Cause Cancer
 - d. Attention, Hazardous Materials
35. Friable materials pose a greater potential for hazard than do non-friable materials because of:
- a. fiber size.
 - b. fiber composition.
 - c. fiber release.
 - d. fiber type.
36. Within 30 days following first employment, the worker should undergo a medical examination which includes at a minimum:
- a. a chest x-ray and a pulmonary function test.
 - b. a chest x-ray, a test for lifting ability, and a pulmonary function test.
 - c. a respiratory disease history evaluation, a chest x-ray, and a pulmonary function test.
 - d. all of the above

37. Which is correct for a respirator's protection factor?
- a. The protection factor is determined by irritant smoke.
 - b. The protection factor means ratio of outside/inside fiber concentration.
 - c. A lower protection factor is usually considered better.
 - d. The protection factor is higher for half-mask than for full-face.
38. Which type of asbestos is most commonly involved in asbestos abatement work in the United States?
- a. amosite.
 - b. chrysotile.
 - c. crocidolite.
 - d. tremolite.
39. What is a method of respirator fit testing that employees can perform on their own?
- a. positive/negative pressure testing
 - b. pulmonary fit testing
 - c. qualitative fit testing
 - d. quantitative fit testing
40. During which of the following circumstances would air monitoring be an appropriate assesment tool?
- a. Prior to the start of a project
 - b. Following final cleanup
 - c. At various locations outside the area to detect escaping fibers
 - d. All of the above
41. Which of the following statements in not true if latex paint is used as an encapsulant?
- a. The paint will provide a highly stable, permanent protection.
 - b. The paint should be applied at a rate of no more than 100 square feet per gallon.
 - c. The paint must be of high vehicle content and at least 25% vehicle resin solids.
 - d. A light mist coat should be followed by a second coat applied at a 90 degree angle.
42. What approved respirator has a rated protection factor of 1,000?
- a. Type C airline respirator
 - b. half mask with dual cartridges
 - c. full face with dual cartridges
 - d. powered air purifying respirator (PAPR)

43. All of the following are recommended for use during the cleaning phase after asbestos removal except:
- a. HEPA vacuum cleaners
 - b. dust masks
 - c. cotton cloths
 - d. wire brushes
44. Work area air monitoring should be conducted:
- a. by performing breathing-zone sampling on workers.
 - b. each day at the start of the shift.
 - c. whenever the debris is bagged.
 - d. when the humidity is high.
45. What determines the protection factor for a respirator?
- a. the size of the mask compared to face
 - b. the ratio of the outside to inside fiber concentration
 - c. use of a half or full face mask by worker
 - d. the color of the filter
46. What type of filter is used with a negative pressure system?
- a. AA cellulose ester membrane (.8u pore size)
 - b. high efficiency particulate air (HEPA)
 - c. nucleopore (polycarbonate)
 - d. no filter is needed
47. In reference to respirator use by workers, which of the following statements is correct?
- a. If the fit is good, a respirator can be worn with a beard.
 - b. A bearded man cannot safely wear a half face mask.
 - c. A respirator need not be worn for a glovebag removal.
 - d. All are correct.
48. Which of the following is not required by OSHA for an acceptable respirator program?
- a. a written exam
 - b. a written program
 - c. employee training
 - d. NIOSH/MESA approved respirators

49. Which type of ladder is the least desirable for use inside a wet removal area?
- a. a step ladder
 - b. a fiberglass ladder
 - c. a wooden ladder
 - d. a metal ladder
50. How would you reduce leakage of contaminated air from the work area during removal?
- a. Allow no visitors.
 - b. Install a window vent with furnace filter.
 - c. Use negative air machine with HEPA filter.
 - d. Spray encapsulants into the air.
51. Which of the following is not a symptom of heat stroke?
- a. sweating
 - b. confusion
 - c. dizziness
 - d. nausea
52. Which is the most appropriate preparation for the truck before loading it with the removed asbestos for the trip to the disposal site?
- a. sweeping and brushing it clean
 - b. washing it with amended water
 - c. vacuuming it with an HEPA unit
 - d. lining it with plastic
53. What should an employee do if he/she stops sweating while working in a hot area?
- a. remove protective clothing
 - b. put on new protective clothing
 - c. leave the work area immediately
 - d. loosen the straps on the respirator
54. After the plastic used to "prep" the removal area is removed during the cleaning phase of a project, it should be:
- a. cleaned for re-use on a future job.
 - b. bagged and disposed as asbestos waste.
 - c. used to "prep" the truck for landfill trips.
 - d. used to wrap equipment for moving to the next job.

55. Which of the following is a feature of air supplied respirators?
- a. fresh supply of air to the wearer
 - b. high level of respirator protection
 - c. air supplied by a compressor/cylinder
 - d. all of the above
56. Why should negative air pressure be maintained in the work area 24 hours a day?
- a. to continuously provide breathable air to workers
 - b. to keep down the humidity for workers
 - c. to be able to monitor fiber levels during work
 - d. to prevent the release of asbestos fibers into surrounding areas
57. Which of the following is necessary when using an approved landfill for asbestos disposal?
- a. containing asbestos waste as required by the landfill
 - b. burying asbestos with 6" of clean fill within 24 hours
 - c. notifying the landfill owner that the material contains asbestos
 - d. following all of the above procedures
58. Disposal procedures for asbestos waste include:
- a. putting large pieces of waste in a lined barrel and sealing it.
 - b. placing waste in an enclosed truck lined with 6 mil plastic.
 - c. double bagging waste in 6 mil plastic bags and taking to a landfill.
 - d. using all of the above techniques.
59. Which item is not determined by visual inspections conducted at the time of final cleaning?
- a. damaged surfaces and areas
 - b. incomplete clean-up of area
 - c. incomplete asbestos abatement work
 - d. excessive airborne asbestos fibers
60. Where in or on a building is friable asbestos most likely to be found?
- a. in sprayed ceilings
 - b. in floor tile
 - c. in roofing
 - d. in siding

61. According to the EPA "Asbestos-in-Schools Rule," a minimum of how many samples must be taken from each "unique sampling area?"
- a. two samples
 - b. three samples
 - c. four samples
 - d. six samples
62. Why is amosite generally removed while dry?
- a. because amosite fibers are small
 - b. amosite clumps while wet
 - c. water does not easily penetrate amosite
 - d. the vacuum will not pick up wet amosite fibers
63. Wet removal of asbestos increases the potential and severity of electrical hazards to workers. Which of the following is not an OSHA requirement for prevention of electrical hazards?
- a. using ground fault circuit interruptors for protection
 - b. using a program for assured equipment grounding
 - c. using only three wire electrical systems and equipment in the work area
 - d. using only low voltage, direct current, electrical system and equipment in the work area
64. Which of the following statements about asbestos fibers and disease is incorrect?
- a. Asbestos fibers can cause disease, depending on the quantity inhaled.
 - b. Asbestos fibers can cause disease because they cannot be expelled from the body.
 - c. Asbestos-related diseases generally do not become evident for 20-40 years.
 - d. Asbestos fibers have been proved to cause disease if swallowed.
65. Which of the following is not a correct completion for this statement?
Keeping the work area under negative air pressure:
- a. keeps fibers in the work area.
 - b. keeps it cooler during work.
 - c. decreases the humidity in the work area.
 - d. eliminates the need to use respirators.
66. What is the preferred route for taking barrels of asbestos materials out of the work area?
- a. through the "clean" room
 - b. through the shower and airlocks
 - c. through a slit in the plastic and side door
 - d. through a separate "plastic" room and set of airlocks

67. Which cleaning technique is considered the least acceptable?
- a. wet wash
 - b. shoveling
 - c. dry sweeping
 - d. HEPA vacuuming
68. Good housekeeping practices during asbestos removal operations call for clean-up of debris from the floor:
- a. at all times.
 - b. at least twice per work shift.
 - c. at the end of the work shift.
 - d. at the end of the job.
69. Which of the following is not an advantage of using a full face respirator instead of a half mask respirator?
- a. some eye protection
 - b. higher protection factor
 - c. constant clear vision
 - d. more stable fit on face
70. Which factor most limits the degree of protection provided by a respirator?
- a. fit of the facepiece
 - b. type of approved filter
 - c. type of approved cartridge
 - d. brand of approved respirator
71. According to the EPA Asbestos-in-Schools Rule, a "unique sampling area" is defined as
- a. an area in which the material does not look friable.
 - b. an area sampled by a person who has not done sampling before.
 - c. an area in which the material looks different from the material in the next area.
 - d. an area within a building which contains friable material that is alike in texture and appearance.
72. Which of the following is most likely to be a problem while wearing a full face respirator?
- a. fogging of the facepiece lens
 - b. needing additional eye protection
 - c. needing a higher protection factor
 - d. getting a good face seal for protection

73. Which of the following is the term used to describe "a scientific measure of a respirator's effectiveness?"
- a. face-fit factor
 - b. protection factor
 - c. filtration factor
 - d. effectiveness factor
74. An outside consultant hired with the necessary expertise and experience with asbestos projects may be an:
- a. engineer.
 - b. architect.
 - c. industrial hygienist.
 - d. all of the above
75. Which of the following information is not required when keeping sampling records?
- a. the location of samples
 - b. the amount of asbestos material identified
 - c. the location of friable and nonfriable materials
 - d. the location of fiberglass
76. During the review for selection of an outside consultant, what evidence should the Asbestos Program Manager request?
- a. the lowest bid for the project among all bidders
 - b. having worked for the building owner in the past
 - c. being familiar with the city and required resources
 - d. experience and training in assessing asbestos problems
77. Which of the following work practices is not used when applying an encapsulant?
- a. Airless sprayers should be used.
 - b. A good grade of oil paint should be used.
 - c. Containment barriers should be erected.
 - d. Respirator and disposable clothing should be worn.
78. Which of the following is not normally the function of an Architectural & Engineering firm with regard to asbestos abatement contracts?
- a. helping comply with building codes
 - b. inspecting the completed work at the job site
 - c. collecting the air samples for asbestos exposure during the job
 - d. generating contract specifications for the project

79. When choosing an encapsulant, the most important consideration is:
- a. it is easily applied.
 - b. it will cost within budget.
 - c. it can eliminate further fiber release.
 - d. it will negate the acoustical properties.
80. Which of the following is not a characteristic of Transmission Electron Microscopy?
- a. high costs
 - b. sample preparation time is long
 - c. readily available at any laboratory
 - d. specific identification of asbestos fibers
81. If an operations and maintenance plan is the choice for asbestos control:
- a. plans must be made for removal.
 - b. all areas of a building must be treated alike.
 - c. inspections must be made every five years.
 - d. a written set of procedures must be established.
82. Which of the following hazards is least likely to be a problem associated with wet asbestos removal operations?
- a. eye hazards
 - b. fire hazards
 - c. slipping hazards
 - d. electrical hazards
83. Which of the following respirators should be used when it has not been established that the employees are being exposed to airborne asbestos at a concentration less than 100 times the OSHA standard?
- a. disposable respirator
 - b. full face piece respirator
 - c. air purifying respirator with filters
 - d. type C supplied air (airline) respirator
84. What should you do when the exit routes and exits from the work area are not marked and are not immediately obvious?
- a. Post a 14-inch by 20-inch diagram.
 - b. Mark them with signs and arrows.
 - c. Show the employees where they are.
 - d. All of the above.

85. Which item of wearing apparel should the employee put on last when preparing to enter the work area?
- a. respirator (mask)
 - b. head cover (hood)
 - c. coveralls (disposable)
 - d. wrist watch (waterproof)
86. The Asbestos Program Manager (APM), having the responsibility for the asbestos program, should have which of the following qualifications?
- a. an engineering degree
 - b. an architect's license
 - c. air monitoring experience
 - d. building/construction experience
87. Work site safety and electrical preparation should include all of the following except
- a. using ground fault circuit interrupters
 - b. covering lighted ceiling lights with plastic
 - c. removing equipment, machinery, and light fixtures
 - d. using dry removal around live transformers/control boxes
88. What should a worker do to perform a "Positive Pressure" fit test of his/her respirator?
- a. cover the exhalation valve and breathe out
 - b. use irritant smoke inside a plastic bag
 - c. cover the inhalation valves and breathe out
 - d. cover the inhalation and exhalation valves
89. Asbestos abatement workers are subject to health related problems which may be aggravated by the humid environment and lockout of HVAC systems. These problems include:
- a. sleeplessness.
 - b. heat exhaustion and heat stroke.
 - c. calcium depletion and malnutrition.
 - d. all of the above
90. What is the most effective strategy for removing asbestos near energized electrical panels?
- a. using large amounts of amended water
 - b. using metal scrapers with long handles
 - c. hanging warning signs and telling employees to be careful
 - d. using hard plastic scrapers and dry removal

91. Which statement about fallout is most accurate?
- a. Fallout is the result of aging.
 - b. Fallout is the result of a water leak.
 - c. Fallout is the result of sweeping or dusting.
 - d. Fallout is the result of gouging or cutting.
92. During final clean-up after an asbestos removal job, what is the primary reason for waiting 24 hours after wet scrubbing the area before scrubbing it again?
- a. to allow the encapsulant to harden
 - b. to allow the area to dry completely
 - c. to allow time for a visual inspection
 - d. to allow the airborne asbestos to settle
93. What must the Asbestos Program Manager do upon choosing an abatement option (enclosure, encapsulation, removal, operations and maintenance plan)?
- a. The manager must inform all employees of the choice.
 - b. The manager must post the area stating choice.
 - c. The manager must document reasons for choice.
 - d. The manager must have a second choice.
94. There are no federal regulations setting a "clearance level" for airborne fibers after an asbestos removal project. However, the generally accepted clearance level taught in this course was
- a. 0.01 f/cc.
 - b. 0.1 f/cc.
 - c. 0.2 f/cc.
 - d. 2.0 f/cc.
95. Asbestos-containing materials in good condition, but with a significant potential for disturbance would be:
- a. not exposed or accessible.
 - b. given high priority for abatement.
 - c. in pipe wrap.
 - d. exposed or accessible or in air plenum or airstream.
96. Enclosure as an option is appropriate when:
- a. no one will enter the area.
 - b. material adheres well to the substrate.
 - c. deteriorating materials causing rapid fiber release, are not present.
 - d. All of the above.

97. From which two rock-forming minerals are asbestiform minerals derived?
- a. amosites and amphiboles
 - b. grunerites and amosites
 - c. chrysotiles and serpentines
 - d. serpentines and amphiboles
98. Which of the following is an EPA sampling precaution?
- a. If a large number of samples are being taken, the sampling person must wear a respirator.
 - b. Everyone in the room should watch to see that the samples are properly taken.
 - c. Zip-lock plastic bags should be used to contain the samples taken.
 - d. The samples must be refrigerated.
99. Which of the following are symptoms of heat stress?
- a. cramps and vomiting
 - b. fatigue and weakness
 - c. hyperactivity and sleeplessness
 - d. a and b above
100. For what purpose is Phase Contrast Microscopy used in the asbestos abatement industry?
- a. for calibrating air sampling pumps
 - b. for identifying asbestos fibers in bulk samples
 - c. for counting fibers collected on air sampling filters
 - d. for determining abatement method

