

2020 HAZWOPER Challenge Year in Review

Thank you for taking part in the Spring Environmental Monthly HAZWOPER refresher challenges in 2020. The following are all the questions presented to you this year followed by the answers and explanations. Please let us know if you have any questions and be on the lookout for new questions in 2021.



1. Under the GHS/Hazcom program, what hazard does the pictogram with the ring on fire represent?
 - A. Explosive
 - B. Acute Toxicity (fatal)
 - C. Oxidizer
 - D. Corrosive
2. Which characteristic is part of the basic definition for a confined space?
 - A. Engulfment hazards
 - B. Large enough to bodily enter and do work
 - C. Oxygen Deficient atmosphere
 - D. Atmosphere above the IDLH for toxics
3. Who should be involved in the development of an Emergency Response Plan?
 - A. Employers
 - B. Employees
 - C. Fire Department
 - D. All of the above
4. What is your initial isolation and evacuation distance for a small spill of liquid UN3203 during nighttime with 11 mph winds? (Ref: 2016 ERG)
 - A. 350 ft. isolation and 350+ ft. evacuation
 - B. 100 ft. isolation and 0.2 mi. evacuation
 - C. 75 ft. isolation and 330 ft. evacuation
 - D. 150 ft. isolation and 150+ ft. evacuation
5. All of the following are methods of Physical decontamination except...
 - A. Sterilization
 - B. Dislodging
 - C. Absorption
 - D. Evaporation
6. A Hazardous Waste generating facility that produces more than 2,200 pounds per month is considered what level generator per federal and Washington regulations?
 - A. Very Small
 - B. Small
 - C. Medium
 - D. Large

2020 HAZWOPER Challenge Year in Review

7. When do you fill in the date on the label of a satellite accumulation container?
 - A. The first time materials are placed into it
 - B. When you put the container in place
 - C. When the container is full
 - D. No date required for satellite accumulation containers

8. How many required elements are there on a GHS/Hazcom **Label**?
 - A. 4
 - B. 5
 - C. 6
 - D. 7

9. What is the Specific Gravity for Formal? (Ref: NIOSH Pocket Guide)
 - A. 1.08
 - B. 0.86
 - C. 1.13
 - D. 33

10. What are the initial isolation and evacuation distances for a large spill from a transport vehicle placarded as Division 2.1 material? (Ref: 2016 ERG)
 - A. 330 ft. isolation and ½ mi. evacuation
 - B. 330 ft. isolation and 330 ft. evacuation
 - C. 330 ft. isolation and 330+ ft. evacuation
 - D. 150 ft. isolation and 150+ ft. evacuation

11. Which color section on the NFPA 704 label represents a reactivity hazard?
 - A. Red
 - B. Blue
 - C. Yellow
 - D. White

12. Under the DOT Hazard Classification System, what hazard is represented by a material that is placarded as 4.3?
 - A. Flammable Gas
 - B. Dangerous when Wet
 - C. Flammable Solids
 - D. Toxic Gases

2020 HAZWOPER Challenge Year in Review

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13. Medical Surveillance programs require you to have medical examinations for all of the following except...
 - A. Certification to wear PPE
 - B. Establish a Baseline
 - C. Exposure to Benzene above the Action Level
 - D. Emergency exposure to Asbestos

14. If you were entering an area that had a measured concentration of 1000 ppm of Octane with an OSHA PEL of 500 ppm and an IDLH of 1000 ppm, what is the minimum respirator protection required if any.
 - A. SCBA in positive pressure mode (APF = 10,000)
 - B. Half-face, air purifying respirator (APF = 10)
 - C. Any supplied-air respirator (APF = 10)
 - D. Full-face, air purifying respirator (APF = 50)

15. What are the initial isolation and evacuation distances for a large spill from a transport vehicle containing Sulphurous acid that is involved in a fire? (Ref: 2016 ERG)
 - A. 150 ft. isolation and ½ mi. evacuation
 - B. ½ mi. isolation and ½ mi. evacuation
 - C. 75 ft. isolation and 75+ ft. evacuation
 - D. 150 ft. isolation and 150+ ft. evacuation

16. On the NFPA 704 label number scale, what represents the highest hazard level?
 - A. 1
 - B. 2
 - C. 3
 - D. 4

17. When establishing zones during Hazardous Material Emergency Response operations, in which zone would rescue be a primary activity?
 - A. Exclusion Zone
 - B. Contamination Reduction Zone
 - C. Support Zone
 - D. All of the above

18. When conducting drum inspections, you should look for all of the following except...
 - A. Proper labeling
 - B. Swelling / Bulging
 - C. Generator Status report
 - D. Deterioration

2020 HAZWOPER Challenge Year in Review

"

19. The maximum amount of acute hazardous waste that may be collected in a satellite accumulation area is...
 - A. 55 gallons
 - B. 1 quart
 - C. 1 pint
 - D. 5 gallons

20. At what distance would you establish the "Hot Line" during an emergency response for a 50 gallon spill of UN2644 during the day with 5 mph winds? (Ref: 2016 ERG)
 - A. 75 ft.
 - B. 100 ft.
 - C. 150 ft.
 - D. 0.1 mi.

21. Besides being a listed waste, Hazardous Waste may also fall under one of the following characterized waste categories except...
 - A. Ignitable
 - B. Special
 - C. Reactive
 - D. Corrosive

22. Which of the following is a Chemical Method utilized during decontamination activities?
 - A. Absorption
 - B. Displacement
 - C. Solidification
 - D. Rinsing

23. What is your initial isolation and evacuation distance for a spill of UN1079 from a single ton cylinder during nighttime with 7 mph winds? (Ref: 2016 ERG)
 - A. 1500 ft. isolation and 2.5 mi. evacuation
 - B. 600 ft. isolation and 1.5 mi. evacuation
 - C. 330 ft. isolation and 1.5 mi. evacuation
 - D. 330 ft. isolation and 330+ ft. evacuation

24. The five roles outlined under the HAZWOPER program include all of the following except...
 - A. First Responder Safety Officer
 - B. First Responder Awareness Level
 - C. Hazmat Technician
 - D. Incident Commander

2020 HAZWOPER Challenge Year in Review

"

25. Which level of Protective Clothing offers you the greatest protection during response operations?
- A. D
 - B. C
 - C. B
 - D. A
26. The 5 steps to a successful emergency response include all of the following except...
- A. Identify
 - B. Notify
 - C. Media Relations
 - D. Cleanup
27. When should an Emergency Response Plan be reviewed?
- A. When a process changes
 - B. After an incident
 - C. Upon initial assignment before starting work
 - D. A & B only
 - E. A, B, & C
28. What is your initial isolation and evacuation distance for a spill of Cesium hydroxide from a rail tank car during nighttime with 15 mph winds? (Ref: 2016 ERG)
- A. 75 ft. isolation and 75+ ft. evacuation
 - B. 75 ft. isolation and ½ mi. evacuation
 - C. 150 ft. isolation and 150+ ft. evacuation
 - D. 330 ft. isolation and 330+ ft. evacuation
29. The levels of control in descending order under OSHA's hierarchy of controls are as follows...
- A. PPE, Administrative, Engineering
 - B. Administrative, PPE, Engineering
 - C. Engineering, PPE, Administrative
 - D. Engineering, Administrative, PPE
30. What part of a fall arrest system reduces the amount of energy applied to the worker during a fall?
- A. Body Harness
 - B. Shock Absorber
 - C. Lanyard
 - D. Lifeline

2020 HAZWOPER Challenge Year in Review

31. What number represents the highest level of hazard in any colored section when utilizing the NFPA 704 labeling system?
- A. 1
 - B. 2
 - C. 3
 - D. 4
32. Which Emergency Response role has the primary responsibilities of identifying, reporting, and isolating a hazardous material leak/spill, but not cleaning it up?
- A. First Responder Awareness Level
 - B. First Responder Operations Level
 - C. HazMat Technician
 - D. HazMat Specialist
 - E. Incident Commander
33. What is the explosive range of Naphthalene? (Ref: NIOSH Pocket Guide)
- A. 1.4% - 11.2%
 - B. 5.9% or higher
 - C. 0.9% - 5.9%
 - D. NA
34. If you were conducting an emergency response to a spill of n-Propanol where there is a measured concentration of 825 ppm with an OSHA PEL of 200 ppm, what is the minimum respirator protection required if any. (Ref: NIOSH Pocket Guide)
- A. SCBA in positive pressure mode (APF = 10,000)
 - B. Half-face, air purifying respirator (APF = 10)
 - C. Continuous flow supplied-air respirator (APF = 50)
 - D. Full-face, air purifying respirator (APF = 50)
35. What is your initial isolation and evacuation distance for a small spill of UN1749 during nighttime with 11 mph winds? (Ref: 2016 ERG)
- A. 330 ft. isolation and 0.7 mi. evacuation
 - B. 1000 ft. isolation and 2.6 mi. evacuation
 - C. 200 ft. isolation and 2.6 mi. evacuation
 - D. 200 ft. isolation and 0.7 mi. evacuation
36. When utilizing the GHS labeling system, what hazard does the skull and crossbones symbol represent?
- A. Acute Toxicity (harmful)
 - B. Corrosive
 - C. Acute Toxicity (toxic or fatal)
 - D. Explosive

2020 HAZWOPER Challenge Year in Review

"

37. What is the IDLH value for an atmosphere containing Methyl Acrylate? (Ref: NIOSH Pocket Guide)
- A. 2200 ppm
 - B. 250 ppm
 - C. 3100 ppm
 - D. 1700 ppm
38. What DOT Hazard class is associated with a flammable solid?
- A. 1
 - B. 2
 - C. 3
 - D. 4
39. All of the following hazards would make a confined space permit required except...
- A. Entrapment Hazards
 - B. Atmospheres above the IDLH
 - C. Atmospheres at 5% of the LEL
 - D. Atmospheres below 19.5% Oxygen
40. What are the protective action distances for a 30-gallon spill of Ethylene Dibromide during the day with 0 to 5 mph winds? (Ref: 2016 ERG)
- A. 100 ft. isolation, 0.1 miles evacuation
 - B. 150 ft. isolation, 150 ft. + for evacuation
 - C. 150 ft. isolation, 0.1 miles evacuation
 - D. 150 ft. isolation, 0.5 mile evacuation
41. A Globally Harmonized System label has 6 required elements including all of the following except...
- A. Pictograms
 - B. Product Identifier
 - C. Container weight
 - D. Hazard Statements
42. What is the Immediately Dangerous to Life and Health (IDLH) concentration of TEA? (Ref: NIOSH Pocket Guide)
- A. 500 ppm
 - B. 200 ppm
 - C. 1 ppm
 - D. 40,000 ppm

2020 HAZWOPER Challenge Year in Review

"

43. Under OSHA's hierarchy of controls, all of the following would be an example of an Administrative control except...
- A. Ventilation
 - B. Signs and Labels
 - C. Training
 - D. Standard Operating Procedures
44. What are the initial isolation and evacuation distances for a large liquid spill from a transport carrying a hazard class 5.2 placard during nighttime with 11 mph winds? (Ref: 2016 ERG)
- A. 75 ft. isolation and 800 ft. evacuation
 - B. 150 ft. isolation and 150 ft.+ evacuation
 - C. 75 ft. isolation and 1.5 mi. evacuation
 - D. 150 ft. isolation and 800 ft. evacuation
45. The following would all be identifiable properties of m-Phthalodinitrile except... (Ref: NIOSH Pocket Guide)
- A. Needle-like
 - B. Almond-like odor
 - C. Yellow
 - D. Flaky solid
46. Using the DOT Hazard Classification System, the hazard represented by a Class 4 material is...
- A. Flammable Liquids
 - B. Flammable Solids
 - C. Oxidizing Substances
 - D. Flammable Gases
47. All of the following would be an example of a Direct Reading Monitor except...
- A. Oxygen Meter
 - B. Combustible Gas Indicator
 - C. Colorimetric Tube
 - D. Passive Dosimeter Badge
48. What is the federal regulatory Time Weighted Average exposure limit for Styrol? (Ref: NIOSH Pocket Guide)
- A. 100 ppm
 - B. 50 ppm
 - C. 200 ppm
 - D. 600 ppm

2020 HAZWOPER Challenge Year in Review

"

49. All of the following activities could take place in the Exclusion zone except...
- A. Cleanup
 - B. Staging
 - C. Decontamination
 - D. Rescue
50. What is the evacuation distance for a 40-gallon spill of Trichloroacetyl Chloride at night with 4 mph winds? (Ref: 2016 ERG)
- A. 0.7 miles
 - B. 0.1 miles
 - C. 0.2 miles
 - D. 150 feet
51. When utilizing the NFPA 704 labeling system, the yellow diamond represents what hazard category?
- A. Special Consideration
 - B. Health
 - C. Flammability
 - D. Reactivity
52. The presence of any of the following hazards would make a confined space permit required except...
- A. Engulfment potential
 - B. Oxygen reading above 19.7%
 - C. Reading above 10% of the LEL
 - D. Readings above the PEL for toxics
53. What is the Specific Gravity of Lime? (Ref: NIOSH Pocket Guide)
- A. 2.7
 - B. 2.9
 - C. 3.34
 - D. 2.97
54. What protective clothing level would you be in if you were utilizing an SCBA with a hooded chemical resistant suit?
- A. Level A
 - B. Level B
 - C. Level C
 - D. Level D

2020 HAZWOPER Challenge Year in Review

"

55. What is the evacuation distance for a 110-gallon spill of UN2676 during the day with 8 mph winds? (Ref: 2016 ERG)
- A. 0.8 miles
 - B. 600 ft.
 - C. 0.2 miles
 - D. 330+ feet downwind

2020 HAZWOPER Challenge Year in Review

"

Answers:

1. C; Refer to pg. 15 of the ERG.
2. B
3. D
4. D ; Find #3203 in the Yellow section of ERG, Refer to guide 135, under Public Safety Section find initial isolation of 150 ft. and under evacuation for Spill, it says increase the isolation distance in the downwind direction so the answer would be 150+ ft.
5. A
6. D
7. C
8. C; Refer to pg. 14 of the ERG.
9. B; Refer to the Chemical, Synonym, and Trade name index in the NIOSH pocket guide, find Formal, refer to pg. 199, look under the synonyms for Methylal to see it listed, find the specific gravity(Sp.Gr) under Chemical & Physical properties.
10. A; Refer to pg. 6 of the ERG to find 2.1 materials are flammable gases. Turn to pg. 8 and find the placard for flammable gases. Refer to guide 118, under Public Safety Section find initial isolation of 330 ft. and under evacuation for Spill, it says ½ mile.
11. C
12. B; Refer to pg. 6 of the ERG.
13. D
14. A; Refer to NIOSH pocket guide, pg. 236 for Octane. Measured concentration is the IDLH; So you would have to use supplied air for this substance.
15. B; Find Sulphurous acid in the Blue section of ERG. Refer to guide 154, It is a large spill and on fire, the isolation distance will be ½ mile and evacuation of ½ mile.
16. D
17. A
18. C
19. B
20. B; Find UN2644 in the Yellow section of ERG, notice that it is highlighted in green which means you must go to Table 1 to find isolation and evacuation distances. Find 2644 in Table 1 on pg. 316. A 50-gallon spill references a small spill and under the small spill column, the isolation distance or “Hot line” would be 100 ft.
21. B
22. C
23. B ; Find UN1079 in the Yellow section of ERG, notice that it is highlighted in green which means you must go to Table 1 to find isolation and evacuation distances. Find 1079 in Table 1 on pg. 297. It is a single ton cylinder spill which would constitute a large spill (refer to green instruction pages) and under the large spill column, it refers you to Table 3. Find 1079 in Table 3, pg. 357. Find the proper transport container, single ton cylinder. Initial isolation is 600 ft. and evacuation for the correct wind speed at night is 1.5 miles.
24. A
25. D; Refer to pg. 383 of the ERG.
26. C
27. E
28. A; Find Cesium hydroxide in the Blue section of ERG, Refer to guide 157. Cesium hydroxide is typically in a solid state. Under Public Safety Section find evacuation distance of 75 ft. For evacuation it says increase the isolation distance in the downwind direction so the answer would be 75+ ft.
29. D
30. B

2020 HAZWOPER Challenge Year in Review

31. D
32. A
33. C; Refer to the NIOSH pocket guide (pg. 221) for Naphthalene. The LEL is 0.9% and the UEL is 5.9%. This is considered the explosive range.
34. A; Refer to the Chemical, Synonym, and Trade name index in the NIOSH pocket guide, find n-Propanol, refer to pg. 268, look under the synonyms for n-Propyl alcohol to see it listed, find the IDLH (800 ppm). The monitored concentration(825 ppm) is above the IDLH, so SCBA is the correct answer.
35. D; Find UN1749 in the Yellow section of ERG, notice that it is highlighted in green which means you must go to Table 1 to find isolation and evacuation distances. Find 1749 in Table 1 on pg. 303. Under the small spill column, the isolation distance would be 200 ft. and the evacuation at night would be 0.7 miles.
36. C; Refer to ERG pg. 15
37. C; Refer to NIOSH pocket guide(pg. 197) for Methyl acrylate. The IDLH value in the upper right corner is 250 ppm.
38. D ; Refer to ERG pg. 6
39. C ; Atmosphere at 10% of the LEL would constitute a permit required confined space.
40. A ; Find Ethylene dibromide in the Blue section of ERG, notice that it is highlighted in green which means you must go to Table 1 to find isolation and evacuation distances. Find 1605 in Table 1 on pg. 301. A 30-gallon spill references a small spill and under the small spill column, the isolation distance would be 100 ft. and evacuation during the day would be 0.1 miles.
41. C ; Refer to pg. 14 of the ERG
42. B ; Refer to the Chemical, Synonym, and Trade name index in the NIOSH pocket guide, find TEA, refer to pg. 318, look under the synonyms for Triethylamine to see it listed, find the IDLH of 200 ppm.
43. A; Ventilation is an Engineering control.
44. D; Refer to pg. 9 and find the placard for 5.2 materials. Refer to guide 148, under Public Safety Section find initial isolation of 150 ft. for liquids and under evacuation for Spill, it says 800ft.
45. C; Refer to the NIOSH pocket guide pg. 258 to find m-Phthalodinitrile, look under the physical description section to find all of the characteristics except that it is yellow.
46. B; Refer to pg. 6 of the ERG
47. D
48. A; Refer to the Chemical, Synonym, and Trade name index in the NIOSH pocket guide, find Styrol, refer to pg. 287, look under the synonyms for Styrene to see it listed, under exposure limits, the OSHA PEL: TWA is 100 ppm.
49. B; Staging takes place in the Support zone.
50. C; Find Trichloroacetyl chloride in the Blue section of ERG, notice that it is highlighted in green which means you must go to Table 1 to find isolation and evacuation distances. Find 2442 in Table 1 on pg. 314. A 40-gallon spill references a small spill and under the small spill column, evacuation during the night would be 0.2 miles.
51. D
52. B; Oxygen levels below 19.5% would make a space permit required.
53. C; Refer to the Chemical, Synonym, and Trade name index in the NIOSH pocket guide, find Lime, refer to pg. 48, look under the synonyms for Calcium oxide to see it listed, under Chemical and Physical properties you will find the Specific Gravity (Sp.Gr) of 3.34.
54. B; Refer to the ERG pg. 383.
55. A; Find UN2676 in the Yellow section of ERG, notice that it is highlighted in green which means you must go to Table 1 to find isolation and evacuation distances. Find 2676 in Table 1 on pg. 316. A 110-gallon spill references a large spill and under the large spill column, the evacuation distance during the day is 0.8 miles.