

**Registration form**

**Competent Person Course**

Continuing Education Course Only, this course does not include a hands-on or actual training.  
**48 HOUR RUSH ORDER PROCESSING FEE ADDITIONAL \$50.00**

Start and finish dates: \_\_\_\_\_

List number of hours worked on assignment must match State Requirement. \_\_\_\_\_

Name \_\_\_\_\_ Signature \_\_\_\_\_  
*I have read and understood the disclaimer notice on page 2. Digitally sign XXX*

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Email \_\_\_\_\_ Fax (\_\_\_\_) \_\_\_\_\_

Phone:  
Home (\_\_\_\_) \_\_\_\_\_ Work (\_\_\_\_) \_\_\_\_\_

Operator ID # \_\_\_\_\_ Exp. Date \_\_\_\_\_

*Please circle/check which certification you are applying the course CEU's/PDH's.*

Water Treatment \_\_\_ Distribution \_\_\_ Collection \_\_\_ Wastewater Treatment \_\_\_

Competent Person Renewal \_\_\_ CCB \$50 \_\_\_\_\_ Onsite Installer \_\_\_ Other \_\_\_\_\_

Technical Learning College PO Box 3060, Chino Valley, AZ 86323  
Toll Free (866) 557-1746 Fax (928) 272-0747 [info@tlch2o.com](mailto:info@tlch2o.com)

If you've paid on the Internet, please write your Customer# \_\_\_\_\_

Please invoice me, my PO# \_\_\_\_\_

**Please pay with your credit card on our website under Bookstore or Buy Now. Or call us and provide your credit card information.**

## **DISCLAIMER NOTICE**

I understand that it is my responsibility to ensure that this CEU course is either approved or accepted in my State for CEU credit. I understand State laws and rules change on a frequent basis and I believe this course is currently accepted in my State for CEU or contact hour credit, if it is not, I will not hold Technical Learning College responsible. I fully understand that this type of study program deals with dangerous, changing conditions and various laws and that I will not hold Technical Learning College, Technical Learning Consultants, Inc. (TLC) liable in any fashion for any errors, omissions, advice, suggestions or neglect contained in this CEU education training course or for any violation or injury, death, neglect, damage or loss of your license or certification caused in any fashion by this CEU education training or course material suggestion or error or my lack of submitting paperwork. It is my responsibility to call or contact TLC if I need help or assistance and double-check to ensure my registration page and assignment has been received and graded. It is my responsibility to ensure all information is correct and to abide with all rules and regulations.

**Professional Engineers;** Most states will accept our courses for credit but we do not officially list the States or Agencies. Please check your State for approval or acceptance.

*You can obtain a printed version of the course manual from TLC for an additional \$149.95 plus shipping charges.*

## **AFFIDAVIT OF EXAM COMPLETION**

I affirm that I personally completed the entire text of the course. I also affirm that I completed the exam without assistance from any outside source. I understand that it is my responsibility to file or maintain my certificate of completion as required by the state or by the designation organization.

## **Grading Information**

In order to maintain the integrity of our courses we do not distribute test scores, percentages or questions missed. Our exams are based upon pass/fail criteria with the benchmark for successful completion set at 70%. Once you pass the exam, your record will reflect a successful completion and a certificate will be issued to you.

**Do not solely depend on TLC's Approval list for it may be outdated.**

**Many States and employers require the final exam to be proctored.**

**All downloads are electronically tracked and monitored for security purposes.**

***We will stop mailing the certificate of completion we need your e-mail address. We will e-mail the certificate to you, if no e-mail address; we will mail it to you.***

# For Texas TCEQ Wastewater Licensed Operators Information

## Wastewater/Collections Rule Changes

### Rule Changes and Updates for Domestic Wastewater Systems

On Nov. 4, 2014, TCEQ commissioners adopted revisions to 30 Texas Administrative Code (TAC), Chapter 217, Design Criteria for Domestic Wastewater Systems, and “re-adopted” previously repealed rules in 30 TAC, Chapter 317, Design Criteria Prior to 2008.

#### ***Some of the changes to Chapter 217 include:***

- Adding new definitions and clarifying existing definitions;
- Adding design criteria and approval requirements for rehabilitation of existing infrastructure;
- Adding design criteria for new technologies, including cloth filters and air lift pumps;
- Making changes to reflect modern practices, standards and trends;
- Modifying rule language to improve readability and enforceability; and
- Modifying the design organic loadings and flows for a new wastewater treatment facility.

### **SUBCHAPTER A: ADMINISTRATIVE REQUIREMENTS §§217.1 - 217.18**

Effective December 4, 2015 §217.1. Applicability. (a) Applicability. (1) This chapter applies to the design, operation, and maintenance of: (A) domestic wastewater treatment facilities that are constructed with plans and specifications received and approved by the executive director after the effective date of the amendments to this chapter; (B) treatment units that are altered, constructed, or re-rated with plans and specifications received and approved by the executive director after the effective date of the amendments to this chapter; (C) collection systems that are constructed with plans and specifications received and approved by the executive director after the effective date of the amendments to this chapter; (D) collection system units that are altered, constructed, or re-rated with plans and specifications received and approved by the executive director after the effective date of the amendments to this chapter; (E) existing domestic wastewater treatment facilities that do not have a current Texas Pollutant Discharge Elimination System permit or a Texas Land Application Permit and are required to have an active wastewater permit; (F) existing wastewater treatment facilities and collection systems that never received approval for plans and specifications from the executive director; and (G) collection system rehabilitation projects covered in §217.56(c) and §217.69 of this title (relating to Trenchless Pipe Installation; and Maintenance, Inspection, and Rehabilitation of the Collection System). (2) Domestic wastewater treatment facilities, treatment units, collection systems, and collection system units with plans and specifications approved by the executive director that were received on or after August 28, 2008 and before the effective date of this chapter must comply with the rules in this chapter, as they existed immediately before the effective date of the amendments to this chapter.

The rules in Texas Commission on Environmental Quality Page 2 Chapter 217 - Design Criteria for Domestic Wastewater Systems effect immediately before the effective date of the amendments to this chapter are continued in effect for that purpose. (3) This chapter does not apply to: (A) the design, installation, operation, or maintenance of domestic wastewater treatment facilities, treatment units, collection systems, or collection system units with plans and specifications that were approved by the executive director on or before August 27, 2008, which are governed by Chapter 317 of this title (relating to Design Criteria Prior to 2008) or design criteria that preceded Chapter 317 of this title; and (B) systems regulated by Chapter 285 of this title (relating to On-Site Sewage Facilities); or collection systems or wastewater treatment facilities that collect, transport, treat, or dispose of wastewater that does not have the characteristics of domestic wastewater, although the wastewater may contain domestic wastewater.

(b) The executive director may grant variances from new requirements added by the amendments of this chapter to a person who proposes to construct, alter, or re-rate a collection system or wastewater treatment facility if the plans and specifications for the project are submitted within 180 days after the date the amendments to this chapter are effective, provided the plans and specifications comply with the rules in effect immediately prior to the amendment. Adopted November 4, 2015 Effective December 4, 2015

**The link to the rules is available on the TCEQ website at <https://www.tceq.texas.gov/rules/indxpdf.html>**

***For Texas Students Only....***

***Please sign and date this notice***

Printed Name

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Signature

Date

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**Texas Students Only**  
**Acknowledgement of Notice of Potential Ineligibility for License**  
*You are required to sign and return to TLC or your credit will not be reported.*

Name: \_\_\_\_\_

Date of Birth: \_\_\_\_\_

Email Address: \_\_\_\_\_

By signing this form, I acknowledge that Technical Learning College notified me of the following:

- the potential ineligibility of an individual who has been convicted of an offense to be issued an occupational license by the Texas Commission on Environmental Quality (TCEQ) upon completion of the educational program;
- the current TCEQ Criminal Conviction Guidelines for Occupational Licensing, which describes the process by which the TCEQ's Executive Director determines whether a criminal conviction:
  - renders a prospective applicant an unsuitable candidate for an occupational license;
  - warrants the denial of a renewal application for an existing license; or
  - warrants revocation or suspension of a license previously granted.
- the right to request a criminal history evaluation from the TCEQ under Texas Occupations Code Section 53.102; and
- that the TCEQ may consider an individual to have been convicted of an offense for the purpose of denying, suspending or revoking a license under circumstances described in Title 30 Texas Administrative Code Section 30.33.

Enrollee Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Name of Training Provider/Organization: Technical Learning College

Contact Person: Melissa Durbin    Role/Title: Dean



**COMPETENT PERSON CEU TRAINING COURSE**  
**Excavation & Trenching CEU Training Course**  
*CUSTOMER SERVICE RESPONSE CARD*

NAME: \_\_\_\_\_

E-MAIL \_\_\_\_\_ PHONE \_\_\_\_\_

***PLEASE COMPLETE THIS FORM BY CIRCLING THE NUMBER OF THE APPROPRIATE ANSWER IN THE AREA BELOW.***

Please rate the difficulty of your course.

Very Easy    0    1    2    3    4    5    Very Difficult

Please rate the difficulty of the testing process.

Very Easy    0    1    2    3    4    5    Very Difficult

Please rate the subject matter on the exam to your actual field or work.

Very Similar    0    1    2    3    4    5    Very Different

How did you hear about this Course? \_\_\_\_\_

What would you do to improve the course?

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Any other concerns or comments.

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***Please write down any questions you were not able to find the answers or that have errors.***

## **Rush Grading Service**

If you need this assignment graded and the results mailed to you within a 48-hour period, prepare to pay an additional rush service handling fee of \$50.00. This fee may not cover postage costs. If you need this service, simply write RUSH on the top of your Registration Form. We will place you in the front of the grading and processing line.

For security purposes, please fax or e-mail a copy of your driver's license and always call us to confirm we've received your assignment and to confirm your identity.

***This course is not good for confined space or competent person certification; this course is only for continuing education purposes. You need a hands-on course for confined space certification. Confined space work/Trenching work is very dangerous and this course is not a substitute for classroom training, it is for professional development only.***

**Make sure that your State will accept this course for credit.**

**California Water Resource Board (Dept. of Public Health) generally does not accept safety courses for credit or assigns ¼ credit.**

## **When Finished with Your Assignment**

### **REQUIRED DOCUMENTS**

Please scan the **Registration Page, Answer Key, Survey and Driver's License** and email it to [info@TLCH2O.com](mailto:info@TLCH2O.com).

### **IPhone Scanning Instructions**

If you are unable to scan, take a photo of these documents with your **iPhone** and send these photos to TLC, [info@TLCH2O.com](mailto:info@TLCH2O.com).

### **FAX**

If you are unable to scan and email, please fax these to TLC, if you fax, call to confirm that we received your paperwork. **(928) 468-0675**

## CERTIFICATION OF COURSE PROCTOR

Technical Learning College requires that our students who takes a correspondence or home study program course must pass a proctored course reading, quiz and final examination. The proctor must complete and provide to the school a certification form approved by the commission for each examination administered by the proctor.

**Instructions.** When a student completes the course work, fill out the blanks in this section and provide the form to the proctor with the examination.

Name of Course: \_\_\_\_\_

Name of Licensee: \_\_\_\_\_

**Instructions to Proctor.** After an examination is administered, complete and return this certification and examination to the school in a sealed exam packet or in pdf format.

I certify that:

1. I am a disinterested third party in the administration of this examination. I am not related by blood, marriage or any other relationship to the licensee which would influence me from properly administering the examination.
2. The licensee showed me positive photo identification prior to completing the examination.
3. The enclosed examination was administered under my supervision on \_\_\_\_\_. The licensee received no assistance and had no access to books, notes or reference material.
4. I have not permitted the examination to be compromised, copied, or recorded in any way or by any method.
5. Provide an estimate of the amount of time the student took to complete the assignment.

Time to complete the entire course and final exam. \_\_\_\_\_

Notation of any problem or concerns:

Name and Telephone of Proctor (please print):

\_\_\_\_\_

\_\_\_\_\_

Signature of Proctor



## Competent Person Answer Key

Name \_\_\_\_\_

Phone \_\_\_\_\_

Did you check with your State agency to ensure this course is accepted for credit?

**No Refunds.**

You are responsible to ensure this course is accepted for credit.

Method of Course acceptance confirmation. Please fill this section

Website \_\_ Telephone Call \_\_ Email \_\_ Spoke to \_\_\_\_\_

Did you receive the approval number, if applicable? \_\_\_\_\_

*You can electronically complete this assignment in Adobe Acrobat DC.*

**Please write down any questions you were not able to find the answers or that have errors.**

Please Circle, Bold, Underline or X, one answer per question. A **felt tipped pen** works best.

1. A B C D

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## NOTICE

THIS MATERIAL WAS PREPARED BY TECHNICAL LEARNING COLLEGE. THIS PUBLICATION IS DESIGNED TO PROVIDE BASIC INFORMATION IN THE REGARD TO THE SUBJECT OF AWARENESS ONLY.

THE INFORMATION PROVIDED IS NOT DESIGNED TO INTERPRET THE FEDERAL RULES OR STATE LAWS, STANDARDS, RULES OR REGULATIONS OR TO REPLACE THE LEGAL ADVICE OF AN ATTORNEY.

TECHNICAL LEARNING COLLEGE WILL NOT TAKE ANY RESPONSIBLY FOR ANY INJURIES, DEATHS, OR TO DAMAGE PROPERTY, REAL OR OTHERWISE CONNECTED TO THIS TRAINING.

*EXCAVATION WORK IS VERY DANGEROUS. IF THERE IS ANY MATERIAL WHICH YOU DO NOT CLEARLY UNDERSTAND, IT IS YOUR RESPONSIBILITY TO HAVE THOSE AREAS EXPLAINED TO YOU BY YOUR SUPERVISOR.*

TECHNICAL LEARNING COLLEGE AND THE INSTRUCTOR ARE NOT RESPONSIBLE FOR ANY PERSONAL PROPERTY DAMAGE OR FOR YOUR COMPANY'S SAFETY POLICES OR PROCEDURES.

TECHNICAL LEARNING COLLEGE IS NOT LIABLE IN ANY WAY FOR ANY INJURIES, DEATHS, LOSS OF WAGES, OR LOSS OF PROPERTY.

I HAVE READ THE ABOVE AND UNDERSTAND THAT THIS IS ONLY A TRAINING AWARENESS OR A REVIEW SESSION.

I ALSO UNDERSTAND THAT EXCAVATION WORK IS VERY DANGEROUS AND THAT IT IS MY RESPONSIBILITY TO KNOW AND FOLLOW ALL PERTINENT SAFETY POLICES AND PROCEDURES.

*I understand that I am 100 percent responsible to ensure that TLC receives the Assignment and Registration Key. I understand that TLC has a zero tolerance towards not following their rules, cheating or hostility towards staff or instructors. I need to complete the entire assignment for credit. There is no credit for partial assignment completion. My exam was proctored. I will contact TLC if I do not hear back from them within 2 days of assignment submission. I will forfeit my purchase costs and will not receive credit or a refund if I do not abide with TLC's rules. I will not hold TLC liable for any errors, injury, death or non-compliance with rules. I will abide with all federal and state rules and rules found on page 2.*

**Please Sign that you understand and will abide with TLC's Rules.**

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**Signature**

***Submit this document with your assignment.***

**Please fax the answer key to TLC Western Campus  
Fax (928) 272-0747**

Always call us after faxing the paperwork to ensure that we've received it.

**Rush Grading Service**

If you need this assignment graded and the results mailed to you within a 48-hour period, prepare to pay an additional rush service handling fee of \$50.00.

*This course contains general OSHA's federal rule requirements. Please be aware that each state implements safety regulations that may be more stringent than OSHA's regulations. Check with your state environmental/health agency for more information. These rules change frequently and are often difficult to interpret and follow. Be careful to be in compliance with your regulatory agencies and do not follow this course for any compliance concerns.*

## Competent Person CEU Training Course Assignment

The Competent Person CEU course assignment is available in Word on the Internet for your convenience, please visit [www.ABCTLC.com](http://www.ABCTLC.com) and download the assignment and e-mail it back to TLC.

You will have 90 days from receipt of this manual to complete it in order to receive your Professional Development Hours (PDHs) or Continuing Education Unit (CEU). A score of 70 % or better is necessary to pass this course. If you should need any assistance, please email or fax all concerns and the completed ANSWER KEY to [info@tlch2o.com](mailto:info@tlch2o.com).

Select one answer per question. Please utilize the answer key. (s) on the answer will indicate either plural and singular tenses.

### Excavation and Trenching Section

1. Although employers have options when meeting some of the requirements, \_\_\_\_\_ must realize that the employee must be protected at all times.  
A. Competent persons            C. Contractors  
B. Employers                      D. None of the above
2. Professional engineers will be required in some situations to plan or design the excavation and/or method of protecting the worker.  
A. True            B. False
3. According to the text, the \_\_\_\_\_ was revised because excavating is the most dangerous of all construction operations.  
A. Competent rule                      C. Emergency rule  
B. OSHA excavation standard        D. None of the above
4. OSHA also revised the \_\_\_\_\_ to clarify the requirements.  
A. Competent rule                      C. Protective equipment standard  
B. Existing standard                  D. None of the above
5. The performance criteria in the new standard provides employers with options when classifying soil and when selecting methods to protect the \_\_\_\_\_ from cave-ins.  
A. Competent person                  C. Construction equipment  
B. Employee                            D. None of the above

### Competent Person

6. Competent person means one who is capable of identifying existing hazards in the surroundings or working conditions that are unsanitary, hazardous, or dangerous to employees. The \_\_\_\_\_ has authorization to take prompt corrective measures to eliminate identified hazards.  
A. Competent person                  C. Watchman  
B. Contractor                         D. None of the above
7. A \_\_\_\_\_ must have specific training in and be knowledgeable about soils analysis, the use of protective systems and the requirements of 29 CFR Part 1926.650-652 Subpart P.  
A. Competent person                  C. Watchman  
B. Contractor                         D. None of the above

8. Everyone is required to practice \_\_\_\_\_ one a year.
- A. Competent person training
  - B. Rescue training exercises
  - C. Emergency procedures
  - D. None of the above

### Competent Person Duties

9. The competent person must have knowledge of \_\_\_\_\_, telephone or radio dispatch.
- A. Personnel assignments
  - B. Work schedules
  - C. Emergency contact methods
  - D. None of the above
10. The competent person removes employees and \_\_\_\_\_ from hazardous conditions and makes all changes necessary to ensure their safety.
- A. Competent persons
  - B. All other personnel
  - C. Protective equipment
  - D. None of the above
11. The competent person performs daily inspections of the protective equipment, \_\_\_\_\_, safety equipment, and adjacent areas.
- A. Work progress
  - B. Construction Crew
  - C. Trench conditions
  - D. None of the above
12. The competent person shall make \_\_\_\_\_ prior to the start of work and as needed throughout the shift.
- A. Personnel assignments
  - B. Training available
  - C. Inspections
  - D. None of the above
13. The competent person shall make \_\_\_\_\_ after every rainstorm or other hazard occurrence.
- A. Inspections
  - B. Training available
  - C. Protective equipment available
  - D. None of the above
14. The competent person makes sure that all \_\_\_\_\_ have proper protective equipment, hard-hats, reflective vests, steel-toed boots, harnesses, eye protection, hearing protection and drinking water.
- A. Competent persons
  - B. Contractors
  - C. Employees
  - D. None of the above

### Scope of Work

15. According to the text, during excavation work a competent person shall be on the job site at all times when personnel are working within or around the \_\_\_\_\_.
- A. Competent person
  - B. Contractors
  - C. Excavation
  - D. None of the above
16. Prior to opening an excavation, the estimated locations of \_\_\_\_\_ that reasonably may be expected to be encountered during excavation work shall be determined.
- A. Unauthorized persons
  - B. Employees
  - C. Underground utility installations
  - D. None of the above
17. \_\_\_\_\_ shall be taken to protect employees against the hazards posed by water accumulation in the excavation.
- A. Additional care
  - B. Adequate precautions
  - C. Ladders
  - D. None of the above

18. According to the text, employees shall be protected from excavated or other materials or equipment that could pose a hazard by falling or rolling into excavations.  
A. True B. False
19. The ladder(s), stairway(s), or ramp shall be spaced so that no employee in the trench excavation is more than fifty (50') feet from a means of egress.  
A. True B. False
20. In trench excavations that are four (4') feet or more in depth, a stairway, ladder, or ramp shall be used as a \_\_\_\_\_.  
A. Tool C. Bridge  
B. Means of access or egress D. None of the above
21. When excavations are made in vehicular traffic areas, \_\_\_\_\_ shall wear a warning vest made with reflective material or highly visibility material.  
A. Competent persons C. Rescue personnel  
B. Each employee D. None of the above
22. The air shall be tested in excavations where \_\_\_\_\_ exist, or could be reasonably expected to exist.  
A. Limited visibilities C. Oxygen deficiency or gaseous conditions  
B. Employees D. None of the above
23. When the atmosphere contains less than 19.5 percent oxygen, the area must be continuously ventilated until the \_\_\_\_\_.  
A. Excavation is closed C. Oxygen levels are above 19.5 percent  
B. Employees enter the space D. None of the above
24. Where a \_\_\_\_\_, the area shall be ventilated until the flammable gas concentration is below 20 percent of the LFL (lower flammable limit).  
A. Competent person requires monitoring C. Worker encounters fumes  
B. Gaseous condition exists D. None of the above
25. Whenever \_\_\_\_\_ exist or could reasonably exist, the air must be monitored continuously to assure that workers are protected.  
A. Traffic conditions C. Oxygen deficiency or gaseous conditions  
B. Excavations D. None of the above
26. Where the stability of adjoining buildings, walls or other structures are \_\_\_\_\_, shoring, bracing, or underpinning shall be provided to ensure the stability of such structures for the protection of employees.  
A. Not a concern C. Endangered by excavation operations  
B. Not mentioned in the specifications D. None of the above
27. In situations where sidewalks, pavement and appurtenant structures may be undermined, a support system such as shoring must be provided to protect \_\_\_\_\_ from the possible collapse of such structures.  
A. Unauthorized persons C. Vehicles  
B. Employees D. None of the above

### Personnel Protective Systems

28. According to the text, employees in \_\_\_\_\_ shall be protected from cave-ins by an adequate protective system, which shall be inspected by a competent person.
- A. Excavations            C. Protective systems  
B. Vehicles                D. None of the above
29. Requirements for sloping, benching or protective systems are found in \_\_\_\_\_.
- A. Safety Manuals            C. CFR 1926.652 (OSHA Construction Standards)  
B. Tabulated data            D. None of the above
30. Whenever support systems, \_\_\_\_\_, or other protective systems are being used, a written copy of the manufacturer's specifications, recommendations, and limitations sheet shall be available at the job site.
- A. Shield systems            C. Ramps  
B. Tabulated data            D. None of the above
31. The use of \_\_\_\_\_ is required for all excavations deeper than five (5') feet, except when excavation is within stable rock.
- A. Tables                    C. Protective systems  
B. Tabulated data            D. None of the above
32. For trench excavations less than five (5') feet deep, the use of \_\_\_\_\_ may not be required unless there is evidence of a potential cave-in. The competent person shall make this determination.
- A. Ladders                    C. Ramps  
B. Protective systems        D. None of the above

### Excavation Protection Systems

33. There are three basic protective systems for excavations and trenches. They are sloping and benching systems, \_\_\_\_\_, and shields.
- A. Shoring                    C. Attendants  
B. Ramps                     D. None of the above
34. Every employee in an excavation or trench shall be protected from \_\_\_\_\_ by an adequate protective system.
- A. Unauthorized persons    C. Polluted air  
B. Cave-ins                    D. None of the above

### Sloping and Benching Systems

35. An option for sloping is to slope to the angle required by OSHA Construction Standards for Type C, which is the most \_\_\_\_\_.
- A. Unstable soil type        C. Porous soil type  
B. Stable soil type            D. None of the above
36. Another option for sloping is to first determine the soil type, then use the table provided in Appendix B of the standard to determine the \_\_\_\_\_.
- A. Maximum allowable angle    C. Protective system to be used  
B. Porosity                    D. None of the above

37. Another option for sloping is to utilize \_\_\_\_\_ prepared by a registered professional engineer.

- A. Instructions
- B. Tabulated data
- C. Standards
- D. None of the above

38. According to the text, a registered professional engineer can design a \_\_\_\_\_ for a specific job.

- A. Table
- B. Sloping plan
- C. Protective system
- D. None of the above

39. \_\_\_\_\_ for excavations five (5) to twenty (20) feet in depth must be constructed in accordance with the instructions of a designated competent person.

- A. Sloping and benching systems
- B. Tabulated data
- C. Trench excavation limits
- D. None of the above

40. A registered professional engineer must design and stamp the sloping and benching systems for excavations \_\_\_\_\_.

- A. Greater than twenty (20) feet deep
- B. In traffic areas
- C. To be made by contractors
- D. None of the above

### Shoring Systems

41. \_\_\_\_\_ is another protective system that utilizes a framework of vertical members, horizontal members, and cross braces to support the sides of the excavation to prevent a cave-in.

- A. Shoring
- B. Tabulated data
- C. Lateral support
- D. None of the above

### Shield Systems (Trench Boxes)

42. Shielding is the third method of providing a safe workplace in excavations. Unlike sloping and shoring, \_\_\_\_\_ does not prevent a cave-in.

- A. Shielding
- B. Tabulated data
- C. Soil testing
- D. None of the above

43. Shields are designed to \_\_\_\_\_, thereby protecting the employees working inside the structure.

- A. Withstand the soil forces caused by a cave-in
- B. Keep water out of the excavation
- C. Bend but not break
- D. None of the above

44. Design and construction of \_\_\_\_\_ is not covered in the OSHA Standards.

- A. Sloping and benching systems
- B. Shielding
- C. Protective systems
- D. None of the above

### Safety Precautions for Shield Systems

45. There must not be any lateral movement of \_\_\_\_\_ when installed.

- A. Sloping and benching systems
- B. Shields
- C. Ladders
- D. None of the above

46. To protect employees from cave-ins when entering and exiting the shield, a ladder within the \_\_\_\_\_ or a properly sloped ramp at the end shall be provided.

- A. Shield
- B. Jobsite
- C. Tabulated data
- D. None of the above

47. According to the text, employees are not allowed in the \_\_\_\_\_ during installation, removal, or during any vertical movement.
- A. Sloping and benching systems    C. Vicinity of the excavation  
 B. Shield    D. None of the above
48. Shields can be installed 2 ft. above the bottom of an excavation, provided that they are designed to \_\_\_\_\_.
- A. Tabulated data    C. Be easily removed  
 B. Resist loads at the full depth    D. None of the above
49. The \_\_\_\_\_ must extend at least 18 inches above the point where proper sloping of the excavation begins.
- A. Sloping and benching systems    C. Protective systems  
 B. Shield    D. None of the above
50. The exposed excavation wall at the \_\_\_\_\_ must be sloped, shored, or shielded.
- A. Excavation site    C. Traffic side of the excavation  
 B. Open end of the shield    D. None of the above

### Personal Protective Equipment

51. \_\_\_\_\_ requires that employees wear a hard hat, safety glasses, and work boots on the jobsite.
- A. The contractor    C. Recommended practice  
 B. OSHA policy    D. None of the above

### Excavation & Trenching Guidelines

52. Procedures and guidelines for the protection of employees working in and around excavations and trenches must be in compliance with OSHA Standards described in Subpart P (CFR 1926.650) for the construction industry.
- A. True    B. False
53. According to the text, the competent person(s) must be trained in accordance with the OSHA Excavation Standard, and all other programs that may apply, and must demonstrate a thorough understanding and knowledge of the programs and the hazards associated.
- A. True    B. False
54. All other employees working in and around the excavation must be trained to recognize the hazards associated with \_\_\_\_\_.
- A. OSHA Standards    C. Personal protective equipment  
 B. Trenching and excavating    D. None of the above

### Hazard Controls

55. Knowing the location of underground installations is a good idea because it could make the work go faster.
- A. True    B. False
56. An excavation safety plan must be developed to protect employees.
- A. True    B. False
57. All overhead hazards (surface encumbrances) must be removed or supported to \_\_\_\_\_.
- A. Meet OSHA Standards    C. Eliminate the hazard  
 B. Make trenching and excavating easier    D. None of the above

58. If \_\_\_\_\_ will be over 20 feet deep, it must be designed by a registered professional engineer.
- A. An excavation
  - B. A means of access or egress
  - C. Construction equipment
  - D. None of the above
59. \_\_\_\_\_, such as sloping, shoring, or shielding, will be utilized to protect employees.
- A. Adequate protective systems
  - B. Soil classifications
  - C. Soil testing
  - D. None of the above
60. Workers must be supplied with, and wear, any \_\_\_\_\_ deemed necessary to protect them while working in excavations.
- A. Uniforms
  - B. Apparel
  - C. Personal protective equipment
  - D. None of the above
61. All \_\_\_\_\_ must be stored at least two (2) feet from the sides of the excavation. The spoil pile must not block the safe means of egress.
- A. Safety plans
  - B. Barricades
  - C. Spoil piles
  - D. None of the above
62. If a trench or excavation is 4 feet or deeper, stairways, ramps, or ladders must be provided as a safe means of access and egress. Employees working in trenches must not have to travel any more than 25 feet laterally to reach a \_\_\_\_\_.
- A. Stairway, ramp, or ladder
  - B. Safe area
  - C. Benched area
  - D. None of the above
63. No employee will be permitted to work in an excavation where \_\_\_\_\_ is accumulating unless adequate protection measures are used to protect the employees.
- A. Construction debris
  - B. Water
  - C. Spoil
  - D. None of the above
64. All excavations and trenches must be inspected daily by a \_\_\_\_\_, prior to employee exposure or entry. Trenches and excavations will also be inspected after any rainfall, soil change, or any other time needed during the shift.
- A. Professional engineer
  - B. Supervisor
  - C. Competent person
  - D. None of the above
65. When excavations and trenches 4 feet or deeper have the potential for toxic substances or \_\_\_\_\_, the air will be tested at least daily.
- A. Cave-ins
  - B. Unauthorized workers
  - C. Hazardous atmospheres
  - D. None of the above
66. If work is in or around traffic, \_\_\_\_\_ must be utilized to ensure the safety of employees, vehicular traffic, and pedestrians.
- A. Signs and barricades
  - B. Soil classifications
  - C. Additional personnel
  - D. None of the above

### Excavation Safety Plan

67. A written excavation safety plan is required. This plan is to be developed to the level necessary to ensure complete compliance with the \_\_\_\_\_ and state and local safety standards.
- A. Professional engineer's requirements
  - B. OSHA Excavation Safety Standard
  - C. Protective systems
  - D. None of the above

### Soil Classification and Identification

68. The Simplified Soil Classification System defined by OSHA Standards consists of four categories: \_\_\_\_\_, Type A, Type B, and Type C.

- A. Stable rock
  - B. Gravel
  - C. Stiff clay
  - D. None of the above
69. Type A soils are \_\_\_\_\_ with an unconfined compressive strength of 1.5 tons per square foot (TSF) or greater.
- A. The least stable
  - B. Cohesive soils
  - C. Field tested
  - D. None of the above
70. Examples of Type A soils are \_\_\_\_\_ like caliche and hardpan.
- A. Cemented soils
  - B. Soil classifications
  - C. Uncommon soils
  - D. None of the above

### Soil Test & Identification

71. The competent person will classify the \_\_\_\_\_ according to the definitions in Appendix A of the OSHA standard based on at least one visual and one manual analysis.

- A. Shields
  - B. Soil type
  - C. Cohesion tests
  - D. None of the above
72. The soil in an excavation is subject to change several times within the scope of a project and the \_\_\_\_\_ will vary with weather and job conditions.
- A. Shields
  - B. Shoring
  - C. Moisture content
  - D. None of the above
73. According to the text, the competent person must also determine the level of protection based on what conditions exist at the time of the test, and \_\_\_\_\_.
- A. Available equipment
  - B. Tabulated data
  - C. Allow for changing conditions
  - D. None of the above
74. Clay, silt, and sand are \_\_\_\_\_. Clay particles are the smallest, silt particles are intermediate, and sand particles are the largest.
- A. Very cohesive
  - B. Corrosive
  - C. Size classifications
  - D. None of the above
75. The degree of \_\_\_\_\_ and plasticity of a soil depend on the amounts of clay, silt, sand, and water present.
- A. Compatibility
  - B. Cohesiveness
  - C. Durability
  - D. None of the above
76. Soil classification tests should be run on freshly excavated samples from the excavation and are designed to determine soil stability based on a number of criteria.
- A. True
  - B. False

## Shielding

77. Shielding does not prevent cave-ins. Instead, it protects the workers in the event of a cave-in.  
A. True      B. False
78. Any bent of deformed structural member of a shield system must be repaired or replaced according to the manufactures' guidelines.  
A. True      B. False
79. When placed in an excavation, shields have sufficient structural strength to support the \_\_\_\_\_, thereby protecting the employees in the trench.  
A. Nearby structures      C. Force of a cave-in should one occur  
B. Construction vehicles      D. None of the above
80. Most \_\_\_\_\_ have two flat, parallel metal walls that are held apart by metal cross braces that are placed at the ends of the "box." This allows for the installation of pipe within the interior dimensions of the shield.  
A. Shields      C. Shoring systems  
B. Reputable manufacturers      D. None of the above
81. An operation where a contractor excavates just enough trench to install the shield, then sets a joint of pipe, then excavates further, then pulls the shield forward to install another joint while the first is being backfilled, is known as "\_\_\_\_\_".  
A. Shielding      C. Standard practice  
B. Cut and cover      D. None of the above
82. \_\_\_\_\_ have become more popular with public works maintenance crews and contractors working in shallow excavations because of their ease of use.  
A. Smaller shields      C. Open-ended shields  
B. Reputable manufacturers      D. None of the above
83. Round shields made of \_\_\_\_\_ have recently appeared.  
A. Approved materials      C. Corrugated metal  
B. Wood      D. None of the above
84. Since shield construction is not covered by OSHA Standards, it is critical that you know your \_\_\_\_\_.  
A. Supplier      C. Competent person  
B. Safety manual      D. None of the above
85. \_\_\_\_\_ supply boxes designed by registered professional engineers and certified for their applications.  
A. Contractor's      C. Local  
B. Reputable manufacturers      D. None of the above
86. Any modification to the shields must be \_\_\_\_\_.  
A. Reported to the competent person      C. Approved by the manufacturer  
B. Noted in the excavation log      D. None of the above
87. Shields in trenches must be installed so as to prevent \_\_\_\_\_ in the event of a cave-in  
A. Lateral movement      C. Cohesion tests  
B. Damage to equipment      D. None of the above

88. According to the text, shields may ride two feet above the bottom of an excavation, provided they are calculated to support the full depth of the excavation and there is no \_\_\_\_\_ under or behind the shield.  
 A. Caving C. Spoil  
 B. Material D. None of the above
89. Workers must be protected when entering or leaving the shield by using a \_\_\_\_\_ within the shield or a properly sloped ramp at the end.  
 A. Shield C. Support  
 B. Ladder D. None of the above
90. Workers must exit the shield during its installation, removal, or \_\_\_\_\_.  
 A. Inclement weather C. During vertical movement  
 B. Soil testing D. None of the above
91. The excavation wall at the \_\_\_\_\_ should be sloped, shored or shielded off to prevent a cave-in from the end.  
 A. Side of the shield C. Open end of the shield  
 B. End of the job D. None of the above
92. If the excavation will be deeper than the \_\_\_\_\_, attached shields of the correct specifications may be used. As an alternate, the excavation may be sloped back to the maximum allowable angle from a point 18 inches below the top of the shield.  
 A. Planned depth C. Designed depth  
 B. Shield is tall D. None of the above

### Inspections

93. The excavations, adjacent areas, and protective systems shall be inspected daily by the \_\_\_\_\_.  
 A. Contractor C. Competent person  
 B. Employees D. None of the above
94. During inspections, the competent person shall look for evidence of a situation that could result in a cave-in, indications of \_\_\_\_\_, hazardous atmospheres or other hazardous conditions.  
 A. Failure of protective systems C. OSHA compliance  
 B. Poor workmanship D. None of the above
95. All \_\_\_\_\_ shall be conducted by the competent person prior to the start of work, as needed throughout the shift, and after every rainstorm or other increasing hazard.  
 A. Inspections C. OSHA compliance inspections  
 B. Writing of excavation reports D. None of the above

### Confined Space Entry Program

#### Purpose

96. The Confined Space Entry Program is provided to protect authorized employees that will enter confined spaces from safety or health hazards associated with confined spaces.  
 A. True B. False

## Scope

97. According to the text, you are required to recognize \_\_\_\_\_ associated with confined spaces.

- A. Internal configurations
- B. Permit-Required Confined Spaces
- C. The dangers and hazards
- D. None of the above

## Definitions

### Confined space:

98. A permit required confined space (permit space) contains or has a potential to contain a \_\_\_\_\_.

- A. Recognized external configuration
- B. Hazardous atmosphere
- C. Entry or exit
- D. None of the above

99. A permit required confined space (permit space) contains a material that has \_\_\_\_\_.

- A. Unauthorized entrants
- B. Non-hazardous atmospheres
- C. The potential for engulfing an entrant
- D. None of the above

100. A permit required confined space (permit space) has an internal configuration such that \_\_\_\_\_ could be trapped or asphyxiated by inwardly converging walls or by a floor which slopes downward and tapers to a smaller cross-section.

- A. An entrant
- B. Hazardous problems
- C. An external configuration
- D. None of the above

101. A permit required confined space (permit space) contains any other recognized serious safety or \_\_\_\_\_.

- A. Engulfing gas
- B. Strange atmospheres
- C. Health hazard
- D. None of the above

102. Each \_\_\_\_\_ must be marked "Confined Space - Entry Permit Required".

- A. Permit-Required Confined Space
- B. Non-hazardous atmosphere
- C. Entry or exit
- D. None of the above

103. A confined space is large enough or so configured that an employee can \_\_\_\_\_.

- A. Have sufficient oxygen
- B. Bodily enter and perform work
- C. Recognize serious safety or health hazards
- D. None of the above

104. A confined space has limited or restricted means for \_\_\_\_\_.

- A. An internal configuration
- B. Entry or exit
- C. Non-hazardous atmosphere
- D. None of the above

105. A confined space is not designed for \_\_\_\_\_.

- A. An external configuration
- B. Non-hazardous atmospheres
- C. Continuous employee occupancy
- D. None of the above

### Confined Space Hazards

106. Fatalities and injuries constantly occur among construction workers who are required to enter \_\_\_\_\_.

- A. An external configuration
- B. Non-hazardous atmospheres
- C. Confined spaces
- D. None of the above

107. Workers encounter both inherent and \_\_\_\_\_ within confined workspaces.
- A. An external configuration
  - B. Induced hazards
  - C. Non-hazardous atmosphere
  - D. None of the above

### Inherent Hazards

108. \_\_\_\_\_ are associated with specific types of equipment and the interactions among them. These hazards can be electrical, thermal, chemical, mechanical, etc.

- A. Inherent hazards
- B. Non-hazardous atmospheres
- C. No safety or health hazards
- D. None of the above

109. Inherent hazards include high voltage, radiation generated by equipment, \_\_\_\_\_, omission of protective features, high or low temperatures, high noise levels, and high-pressure vessels and lines.

- A. Defective design
- B. Non-hazardous atmosphere
- C. An external configuration
- D. None of the above

110. Inherent hazards usually cannot be eliminated without degrading or shutting down the system or equipment. Therefore, emphasis must be placed on \_\_\_\_\_.

- A. Hazard control methods
- B. Non-hazardous atmospheres
- C. Non-continuous employee occupancy
- D. None of the above

### Induced Hazards

111. \_\_\_\_\_ result from a multitude of incorrect decisions and actions that occur during the actual construction process.

- A. Induced hazards
- B. Below-grade locations
- C. Build-up of explosive gases
- D. None of the above

112. Some examples of induced hazards are: omission of protective features, physical arrangements that may cause unintentional worker contact with electrical energy sources, oxygen-deficient atmospheres created at the bottom of pits or shafts, lack of safety factors in structural strength, and \_\_\_\_\_.

- A. Common confined spaces
- B. Flammable atmospheres
- C. Extreme temperatures
- D. None of the above

### Typical Examples of Confined Workspaces

113. Confined workspaces in construction contain \_\_\_\_\_.

- A. Purging agents
- B. Below-grade location
- C. Both inherent and induced hazards
- D. None of the above

### Vaults

114. Workers must enter \_\_\_\_\_ found on the construction jobsite to perform a number of functions.

- A. Common confined spaces
- B. Hazards
- C. A variety of vaults
- D. None of the above

115. The restricted nature of vaults and their frequently \_\_\_\_\_ are reasons that vaults have an assortment of safety and health problems.

- A. Purged atmosphere
- B. Below-grade location
- C. Explosive atmosphere
- D. None of the above

### Oxygen-Deficient Atmosphere

116. The ever-present possibility of \_\_\_\_\_ is one of the major problems confronting construction workers while working in vaults.

- A. A common confined space
- B. Vaults
- C. An oxygen-deficient atmosphere
- D. None of the above

### Explosive or Toxic Gases, Vapors, or Fumes

117. \_\_\_\_\_ produce toxic fumes which are confined in the limited atmosphere of a confined space.

- A. Purging agents
- B. Below-grade locations
- C. Welding and soldering
- D. None of the above

### Electrical Shock

118. \_\_\_\_\_ results because the contractor has not provided an approved grounding system or the protection afforded by ground-fault circuit interrupters or low-voltage systems.

- A. Common confined space
- B. Electrical shock
- C. An oxygen-deficient atmosphere
- D. None of the above

### Purging

119. Purging agents such as nitrogen and argon may enter a vault from adjacent areas. These agents may displace the oxygen in the vault and asphyxiate workers almost immediately.

- A. True
- B. False

### Materials Falling In and On

120. According to the text, a \_\_\_\_\_ normally considered a problem associated with confined spaces is material or equipment which may fall into the vault.

- A. Common confined space
- B. Hazard
- C. Oxygen-deficient atmosphere
- D. None of the above

121. If the \_\_\_\_\_ were removed, materials could fall into the vault, causing injury to the workers inside.

- A. Purging agents
- B. Manhole covers
- C. Explosive gases
- D. None of the above

### Condenser Pits

122. Because of their large size, condenser pits found in the construction of nuclear power plants are often overlooked as \_\_\_\_\_.

- A. Common confined spaces
- B. Hazards
- C. Potentially hazardous confined spaces
- D. None of the above

123. Condenser pits create large containment areas for the accumulation of toxic fumes and gases, or for the creation of \_\_\_\_\_ when purging with argon, Freon, and other inert gases.

- A. Purging agents
- B. Oxygen-deficient atmospheres
- C. Build-up of explosive gases
- D. None of the above

124. Workers above will create other \_\_\_\_\_ by dropping equipment, tools, and materials into the condenser pit.

- A. Hazards
- B. Collection places
- C. Problems with the pumps
- D. None of the above

## Manholes

125. Manholes are necessary to provide a means of entry into and exit from vaults, tanks, and pits, but these confined spaces may present \_\_\_\_\_ which could cause injuries and fatalities.

- A. Serious hazards
- B. Ventilation ducts
- C. Sumps
- D. None of the above

126. \_\_\_\_\_ are associated with manholes. For example, workers could fall into manholes when covers are missing.

- A. Nitrogen purges
- B. Collection places
- C. A variety of hazards
- D. None of the above

## Pipe Assemblies

127. The pipe assembly is one of the \_\_\_\_\_ encountered throughout the construction site,

- A. Electrical shock risks
- B. Ventilation ducts
- C. Most frequently unrecognized types of confined spaces
- D. None of the above

128. Once inside a pipe assembly, workers are faced with \_\_\_\_\_, often caused by purging with argon or another inert gas.

- A. Nitrogen purge or dry air
- B. Collection places
- C. Potential oxygen-deficient atmospheres
- D. None of the above

129. The worker in a pipe may be subject to toxic atmospheres from \_\_\_\_\_ generated by the worker in the pipe, or by other workers operating outside the pipe at either end.

- A. Electrical shock
- B. Welding fumes
- C. Sumps
- D. None of the above

130. Pipes have \_\_\_\_\_ which provide little room for the workers to move about and gain any degree of comfort while performing their tasks.

- A. Nitrogen purge or dry air
- B. Collection places
- C. Generally restricted dimensions
- D. None of the above

131. \_\_\_\_\_ is another problem to which the worker is exposed when inside a pipe assembly.

- A. Electrical shock
- B. Ventilation ducts
- C. Welding fumes
- D. None of the above

132. The worker may suffer \_\_\_\_\_ caused by heat within the pipe run.

- A. Heat prostration
- B. Exposure to toxic gases
- C. Problems with the pumps
- D. None of the above

## Ventilation Ducts

133. Ventilation ducts create a \_\_\_\_\_ which moves heated and cooled air and exhaust fumes to desired locations in the plant.

- A. Collection place
- B. Complex network
- C. Shortcut to other areas
- D. None of the above

134. Depending on where the ventilation ducts are located, \_\_\_\_\_.

- A. Nitrogen purge or dry air may be found
- B. Collection places could exist
- C. Oxygen deficiency could exist
- D. None of the above

135. Other problems associated with work inside ventilation ducts are electrical shock hazards and \_\_\_\_\_.

- A. Heat stress
- B. Water
- C. Welding fumes
- D. None of the above

### Tanks

136. Tanks are \_\_\_\_\_ that are used for a variety of purposes, including the storage of water and chemicals.

- A. Nitrogen purge locations
- B. Collection places
- C. Another type of confined workspace
- D. None of the above

137. According to the text, oxygen-deficient atmospheres, along with toxic and explosive atmospheres created by the substances stored in the tanks, present hazards to workers.

- A. True
- B. False

138. Heat in tanks may cause \_\_\_\_\_, particularly on a hot day.

- A. Heat prostration
- B. Equipment failure
- C. Problems with pumps
- D. None of the above

139. The \_\_\_\_\_ often requires workers to climb ladders to reach high places on the walls of the tank.

- A. Electrical shock potential
- B. Ventilation duct
- C. Nature of the tank's structure
- D. None of the above

### Sumps

140. Workers may encounter \_\_\_\_\_ when entering sumps.

- A. Nitrogen purge or dry air
- B. Problems with pumps
- C. An oxygen-deficient atmosphere
- D. None of the above

141. Because of the wet nature of the sump, the use of power tools inside may create \_\_\_\_\_ hazards.

- A. Electrical shock
- B. Inadequate lighting
- C. Slipping
- D. None of the above

### Containment Cavities

142. Containment cavities are characterized by little or no air movement. Ventilation is always a problem, and the possibility of oxygen deficiency exists.

- A. True
- B. False

143. Welding and other gases may easily collect in containment cavities, creating \_\_\_\_\_.

- A. Toxic atmospheres
- B. Poor ventilation
- C. Confined workspaces
- D. None of the above

### Electrical Transformers

144. Before electrical transformers are opened, they must be \_\_\_\_\_ by pumping in air.

- A. Nitrogen purged
- B. Collection places
- C. Well vented
- D. None of the above

145. Before entering a transformer, testing for \_\_\_\_\_ is mandatory.
- A. Welding fumes
  - B. Ventilation
  - C. Oxygen deficiency and for toxic atmospheres
  - D. None of the above

### Heat Sinks

146. When inside the heat sink, workers are exposed to welding fumes and electrical hazards, particularly because water accumulates in the \_\_\_\_\_.
- A. Bottom of the sink
  - B. Top of the sink
  - C. Equipment
  - D. None of the above

147. It is difficult to communicate with workers in the \_\_\_\_\_ because radio signals are deadened by the rebar in the walls of the structure.
- A. Pump station
  - B. Heat sink
  - C. Collection places
  - D. None of the above

148. Heat sinks are larger pit areas that contain cooling water in the event there is a problem with the pumps located at the plant water supply that would prevent cooling water from reaching the nuclear reactor core.
- A. True
  - B. False

### Unusual Conditions

#### Confined Space within a Confined Space

149. One of the most hazardous confined spaces of all is a confined space within a confined space.
- A. True
  - B. False

150. The \_\_\_\_\_ associated with the outer confined space and those of the inner confined space both require testing, monitoring, and control.
- A. Potential hazards
  - B. Access passages
  - C. Manholes
  - D. None of the above

151. Often, only the outer space is evaluated for potential hazards. Workers are also faced with \_\_\_\_\_ when they enter the inner space.
- A. Poor lighting
  - B. Excavations
  - C. Potentially hazardous conditions
  - D. None of the above

152. Workers entering a vessel inside an access pit should do so only after both spaces have been evaluated and \_\_\_\_\_.
- A. Purged
  - B. Accessed
  - C. Proper control measures established
  - D. None of the above

#### Hazards in One Space Entering another Space

153. According to the text, during an examination of \_\_\_\_\_, situations are often encountered which are not always easy to evaluate or control.
- A. Tanks
  - B. Excavations
  - C. Confined spaces in construction
  - D. None of the above

154. A room that classifies as a confined space may be relatively safe for work. However, access passages from other areas outside or adjacent to the room could, at some point, allow the transfer of \_\_\_\_\_ into the "safe" room.
- A. Hazardous agents
  - B. Equipment and tools
  - C. Unauthorized workers
  - D. None of the above

155. Welding fumes and other \_\_\_\_\_ generated in one room may easily travel through a pipe into another area, causing that area to change from a safe to an unsafe workplace.  
A. Toxic materials                      C. Noise  
B. Construction debris                D. None of the above

156. In a situation where hazards in one space may enter another, a serious problem is that workers working in the "safe" area are not aware of the \_\_\_\_\_.  
A. Oxygen Level                      C. Hazards leaking into their area  
B. Access passages                    D. None of the above

### **Permitted Confined Space Entry Program**

157. Subpart P (of OSHA's Construction Regulations) applies to all \_\_\_\_\_ in the earth's surface.

A. Open excavations                C. Pits  
B. Vaults                                D. None of the above

158. According to the text, all trenches are \_\_\_\_\_.  
A. Too narrow for work            C. Safe for short-term work  
B. Excavations                        D. None of the above

159. According to the text, all excavations are \_\_\_\_\_.  
A. Permit-required                  C. Access passages  
B. Not trenches                        D. None of the above

### **Permit Required Confined Space Entry General Rules**

160. According to the text, only authorized and trained employees may enter a \_\_\_\_\_ or act as safety watchmen/attendants.

A. Hazard                                C. Confined space  
B. Pipe                                    D. None of the above

161. Employees are not permitted to smoke \_\_\_\_\_ or near the entrance/exit area.  
A. Near air and oxygen monitors    C. In a confined space  
B. During a side entry                D. None of the above

162. A watchmen or attendant must be present at all times during \_\_\_\_\_.  
A. Confined space entries            C. Air monitoring  
B. Access passages                    D. None of the above

163. According to the text, constant visual or voice communication will be maintained between the safety watchmen and employees entering \_\_\_\_\_.

A. Inner spaces                        C. A confined space  
B. Access passages                    D. None of the Above

164. According to the text, no \_\_\_\_\_ will be made or work conducted below the level of any hanging material or material that could cause engulfment.

A. Monitoring of entrant status      C. Identification of authorized entrants  
B. Bottom or side entry                D. None of the above

165. \_\_\_\_\_ is required before workers are allowed to enter any permit-required confined space. Oxygen levels in the confined space must be between 19.5 and 23.5 percent.

- A. Air and oxygen monitoring
- B. A supervisor
- C. Communication
- D. None of the above

166. Air and oxygen monitoring will check the levels of oxygen, explosive gasses, and carbon monoxide. Entry will not be permitted if explosive gas is detected above one-half the \_\_\_\_\_.

- A. Nitrogen level
- B. Argon level
- C. Lower Explosive Limit (LEL)
- D. None of the above

167. When covers are removed, all \_\_\_\_\_ will be protected by a barricade to prevent injuries to others.

- A. Air and oxygen monitoring
- B. Side entries
- C. Openings to confined spaces
- D. None of the above

### **Confined Space Duties and Responsibilities**

#### **Employees**

168. Employees must not \_\_\_\_\_ that have not been evaluated for safety concerns.

- A. Follow program requirements
- B. Report hazards
- C. Enter any confined spaces
- D. None of the above

#### **Management**

169. Management must provide annual confined space training to all employees that may need it.

- A. True
- B. False

170. Management must annually review the confined space entry program and all entry permits.

- A. True
- B. False

#### **Rescue or Training Department**

171. The Rescue or Training Department must provide proper equipment for entry and rescue teams.

- A. True
- B. False

#### **Entry Supervisor**

172. Entry supervisors must coordinate all entry procedures, tests, \_\_\_\_\_, equipment, and other activities related to the permit space entry.

- A. Publicity
- B. News media
- C. Permits
- D. None of the above

173. Before endorsing the permit and allowing entry to begin, the \_\_\_\_\_ must check that all appropriate entries have been made on the permit, all tests specified by the permit have been conducted, and that all procedures and equipment specified by the permit are in place.

- A. Entry supervisor
- B. Attendant
- C. Unauthorized persons
- D. None of the above

174. The rescue workers must terminate the entry and cancel the permit when the entry is complete or there is a need for terminating the permit.

- A. True
- B. False

175. The entry supervisor must verify that rescue services are available and that the means for summoning them are operable.

- A. True
- B. False

## Entry Attendants

176. A responsibility of the entry attendant is to know the hazards that may be faced during entry, including information on the mode, signs or symptoms, and consequences of the exposure.

- A. True      B. False

177. A responsibility of the entry attendant is to be aware of \_\_\_\_\_ of hazard exposure on entrants.

- A. The attendants' primary duty      C. Possible behavioral effects  
B. Worker training      D. None of the above

178. A responsibility of the entry attendant is to continuously maintain an accurate count of entrants in the permit space and ensure a means to \_\_\_\_\_.

- A. Timely complete the work      C. Accurately identify authorized entrants  
B. Add workers when needed      D. None of the above

179. A responsibility of the entry attendant is to remain outside the permit space during entry operations until \_\_\_\_\_.

- A. Assistance is requested      C. Relieved by another attendant  
B. Safety equipment arrives      D. None of the above

180. A responsibility of the entry attendant is to \_\_\_\_\_ as necessary to monitor entrant status and alert entrants of the need to evacuate.

- A. Communicate with entrants      C. Check the work progress  
B. Encourage entrants      D. None of the above

181. A responsibility of the entry attendant is to monitor activities inside and outside the space to determine if it is safe for entrants to remain in the space, and order the entrants to immediately evacuate if the attendant detects a prohibited condition.

- A. True      B. False

182. A responsibility of the entry attendant is to summon rescue and other emergency services as soon as the attendant \_\_\_\_\_ to escape the permit space hazards.

- A. Identifies entrant status      C. Determines the entrants need assistance  
B. Gets approval to summon rescue      D. Accurately unauthorized entrants

183. A responsibility of the entry attendant is to perform non-entry rescues as specified by that rescue procedure and entry supervisor.

- A. True      B. False

## Duties of the Person Authorizing or in Charge of the Entry

Note: This section further explains the duties of the Entry Supervisor.

184. If the person who would otherwise issue an entry permit is in charge of the entry and present during the entire entry, a written permit is still required even if that person uses a checklist.

- A. True      B. False

185. The person in charge of the entry may also serve as the Entrant at the site.

- A. True      B. False

### Special Considerations During A Permit Required Entry

186. Welding, drilling, or sludge removal work being performed in a permit entry confined space could cause the atmosphere in the space to change.

- A. True      B. False

187. In situations such as welding, drilling, or sludge removal, continuous air monitoring of the confined space throughout the time of the entry is not required.

- A. True      B. False

188. If the \_\_\_\_\_ leave the confined space for any significant period of time, the atmosphere of the confined space must be retested before the workers are allowed to reenter the confined space.

- A. Workers                      C. Unauthorized persons  
B. Attendants                    D. None of the above

### Unauthorized Persons

189. Actions must be taken when \_\_\_\_\_ approach or enter a permit space while entry is under way.

- A. Authorized workers      C. Unauthorized persons  
B. Rescue Workers          D. None of the above

190. \_\_\_\_\_ must be warned to stay away from the permit space,

- A. Authorized workers      C. Entrants  
B. Unauthorized persons    D. None of the above

191. If \_\_\_\_\_ have entered the space, they must be advised to exit immediately.

- A. Authorized workers      C. Unauthorized persons  
B. Entrants                    D. None of the above

### Entrants

192. According to the text, all \_\_\_\_\_ must be authorized by the entry supervisor to enter permit spaces, have received the required training, have used the proper equipment, and observed the entry procedures and permit requirements

- A. Workers                    C. Unauthorized persons  
B. Entrants                    D. None of the above

193. Entrants are required to know the \_\_\_\_\_ that may be faced during entry.

- A. Spaces                      C. Unauthorized persons  
B. Hazards                    D. None of the above

194. Entrants must know information on the mode, signs or symptoms, and consequences of exposure.

- A. True      B. False

195. Entrants are required to alert the attendant whenever the entrant recognizes any warning signs or symptoms of exposure to a dangerous situation, or whenever any prohibited condition is detected.

- A. True      B. False

196. Entrants must exit the permit space as quickly as possible when given an order to evacuate by the attendant or entry supervisor.

- A. True      B. False

## Permit Required Confined Space Entry General Rules

### Confined Space Entry Permits

197. According to the text, Confined Space Entry Permits must be completed before any employee \_\_\_\_\_.

- A. Begins work
- B. Leaves the permit space
- C. Enters a permit-required confined space
- D. None of the above

198. \_\_\_\_\_ will expire before the shift is completed or if any pre-entry conditions change.

- A. Air and oxygen monitoring
- B. Project schedules
- C. Confined Space Entry Permits
- D. None of the above

199. \_\_\_\_\_ will be maintained on file for 12 months.

- A. Air and oxygen monitoring data
- B. Project schedules
- C. Confined Space Entry Permits
- D. None of the above

### Contractor Entry

200. According to the text, all work by \_\_\_\_\_ that involves the entry into confined spaces will follow the procedures of this program.

- A. Management
- B. Supervisors
- C. Non-company employees
- D. None of the above

## When Finished with Your Assignment

### REQUIRED DOCUMENTS

Please scan the **Registration Page, Answer Key, Survey and Driver's License** and email it to [info@TLCH2O.com](mailto:info@TLCH2O.com).

### IPhone Scanning Instructions

If you are unable to scan, take a photo of these documents with your **iPhone** and send these photos to TLC, [info@TLCH2O.com](mailto:info@TLCH2O.com).

### FAX

If you are unable to scan and email, please fax these to TLC, if you fax, call to confirm that we received your paperwork. **(928) 468-0675**