

SYSTEM SCAFFOLD

COMPETENT PERSON TRAINING



VERSION 11-19

EXAM

INSTRUCTIONS IMPORTANT!

Read these instructions carefully before you start the exam.

DON'T WRITE IN THESE BOXES

I.D. NUMBER AREA CODE PHONE NUMBER TEST FORM

LAST NAME FIRST NAME M.I. CODE

SIMPSON HOMER J []

NAME: HOMER J. SIMPSON
SUBJECT: CPT FRAME SCAFFOLDS
DATE: 3 MARCH 2018

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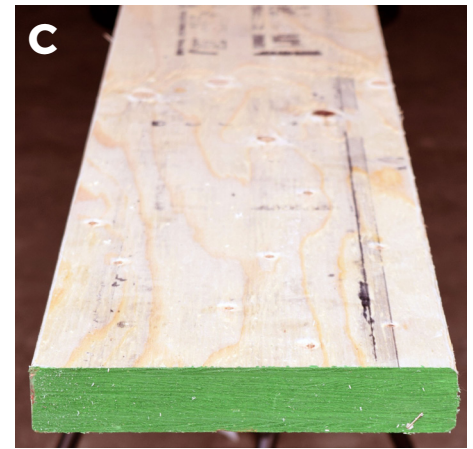
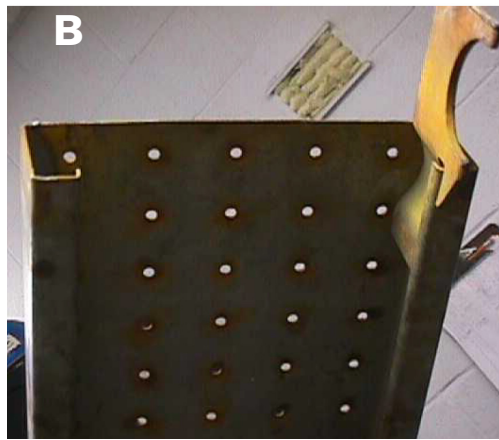
SUBJ SCORE

- Use PENCIL only
- Write your name in CAPITAL letters
- Shade in the corresponding dot below each letter in your NAME.
- Make sure to shade in the whole dot as shown.
- ERASE thoroughly any mistakes
- Make sure the row number of the dot you shade matches the question you are answering
- Take time to check that you did not miss any questions.

DECIDE IF THE STATEMENT IS :
TRUE OR FALSE?

1. **Frame Scaffolds are well suited for jobs with limited access.**
 - a) TRUE
 - b) FALSE
2. **Baseplates keep the scaffold level on uneven surfaces.**
 - a) TRUE
 - b) FALSE
3. **Tube & Clamp Scaffold components can be used with Frame and System Scaffolds.**
 - a) TRUE
 - b) FALSE
4. **Scaffold loads are transferred to the foundation through crossbraces.**
 - a) TRUE
 - b) FALSE

5. **If scaffold builders comply with local Regulations, Codes and Standards, there will be less risk of accidents and injuries.**
 - a) TRUE
 - b) FALSE
6. **There are no restrictions as to where connections can be made on Tube & Clamp Scaffolds.**
 - a) TRUE
 - b) FALSE
7. **If a scaffold's foundation is uneven, you can use bricks, pieces of wood or scrap material under baseplates or sills as blocking or packing.**
 - a) TRUE
 - b) FALSE
8. **Intermixing scaffold components from different manufacturers is not recommended.**
 - a) TRUE
 - b) FALSE



USE IT OR LOSE IT?

Inspect the platform units in the pictures above, read the scenarios below and decide if the unit is safe to use.

9. **PICTURE A:** This plank has a musty smell and feels lighter than the other scaffold planks. Should you use this plank on your scaffold platform?

- a) YES
- b) NO

10. **PICTURE B:** Should you use this metal deck on your scaffold platform?

- a) YES
- b) NO

11. **PICTURE C:** This scaffold grade plank has been used once as a sill. Should you use this plank on your platform?

- a) YES
- b) NO

FOR THE FOLLOWING STATEMENTS
CHOOSE THE BEST ANSWER:

12. It is ok to use a scaffold grade plank with an end split if:

- a) The split is no longer than 18in (457m)
- b) The split is shorter than the width of the plank
- c) It is never ok to use a plank with an end split

13. If the base of a scaffold must be located in an area containing mud or loose soil, what measures should be taken?

- a) The existing soil should be replaced with gravel or crushed stone and sills must be used
- b) The loose soil or mud should be compacted down and baseplates used
- c) Screwjacks should be used to level the scaffold

14. Every scaffold component is required to support its own weight plus:

- a) The weight of the workers and materials
- b) Four times the maximum load applied to it
- c) The weight of the scaffold and the vertical load

15. Before using any scaffold platform unit you must inspect it to:

- a) ensure that there are no weak areas, deterioration, or face breaks
- b) make sure that toeboards are installed correctly
- c) make sure it is stamped "OSHA Approved"

16. What is the possible consequence of insufficient overhang of your scaffold planks?

- a) The load capacity of the plank could decrease
- b) The plank could tip up if a worker stands on it
- c) The plank could slip off its supports

17. For what reason might you need to place ties closer together than local regulations require?

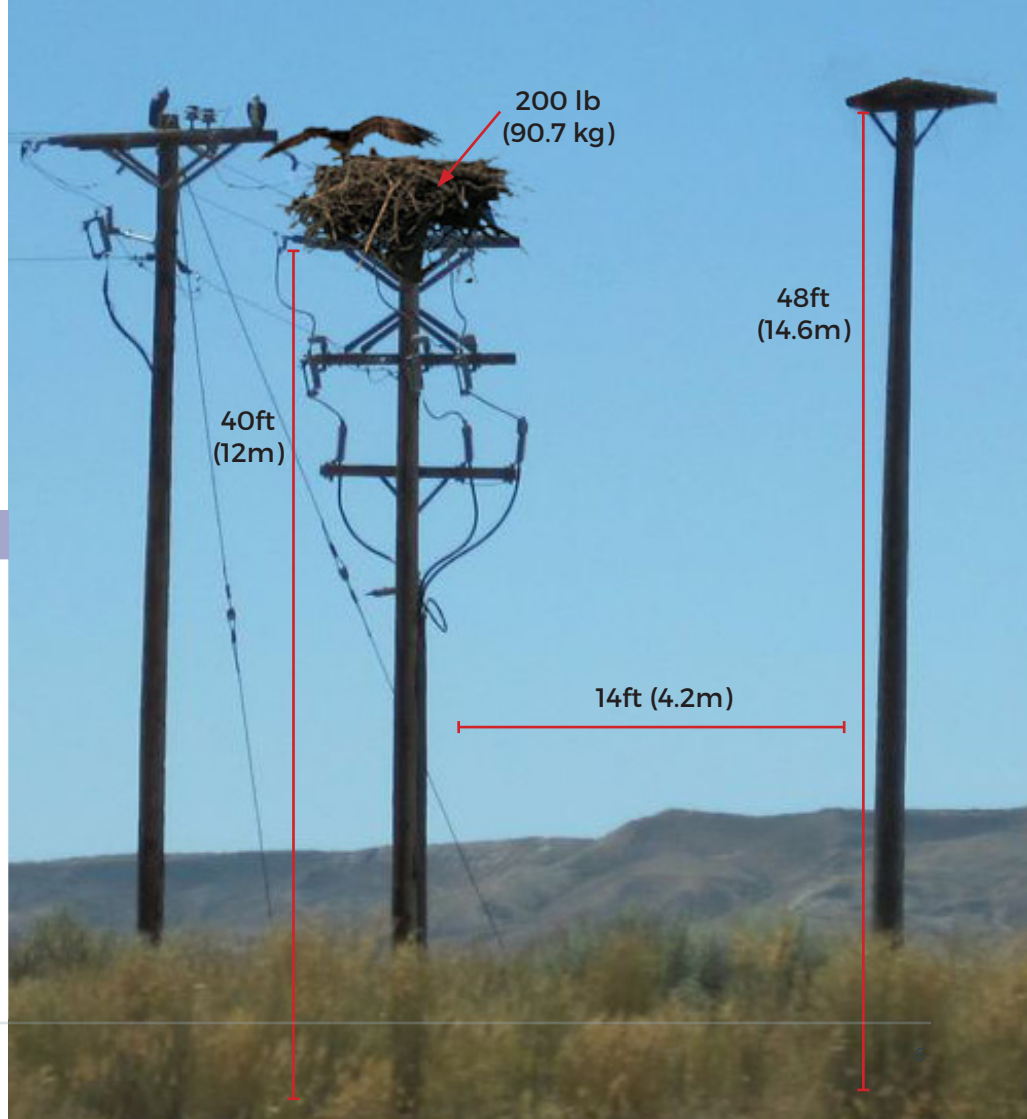
- a) When the foundation has a low bearing capacity
- b) When the scaffold is enclosed
- c) When bays are more than 7ft (2.1m) apart

SCENARIO: **ONE**

An osprey has built a nest on top of a 40ft (12m) powerline. Volunteers from a nature group will remove and relocate the nest during a planned 2 hour power outage. The nest will be relocated to a 48ft (14.6m) nesting platform installed about 14ft (4.2m) away from the power line. The foundation is a mix of dry clay and organic material and it is uneven.

SCENARIO SUMMARY:

WORK/ ACTIVITY:	<i>Moving a heavy nest</i>
TYPE & SHAPE OF STRUCTURE:	<i>40 ft (12 m) Electrical Pole 48 ft (14.6 m) Nest Platform</i>
CONDITIONS:	<i>Foundation is uneven, mix of dry clay and organic material</i>
DURATION:	<i>1-2 hours</i>
LOADS:	<i>3-4 volunteers 200 lbs (90.7 kg) nest</i>



SCENARIO QUESTIONS:

TRUE OR FALSE?

- 18. A rolling tower scaffold would be the best configuration for this scenario.**
- a) True
 - b) False
- 19. An electrical wire does not necessarily have to touch the scaffold to pass a current through it.**
- a) True
 - b) False
- 20. If the power was on, it would be unsafe to build the scaffold close to the power line.**
- a) True
 - b) False

SCENARIO QUESTIONS:

CHOOSE BEST ANSWER

- 21. What two factors do you need to consider when choosing sills for this scaffold?**
- a) The height of the scaffold and the intended load
 - b) The length of time the scaffold is required and the weather
 - c) The soil capacity and the weather forecast.
- 22. What type of fall protection can be used on this scaffold?**
- a) Safety net
 - b) Guardrail system
 - c) Catch platform
- 23. If the ground is sloped where you want to place your sills, what should you do?**
- a) Start at the highest point so you can level using screwjacks
 - b) Backfill the sill area with crushed stone or gravel
 - c) Use bricks or short pieces of lumber under sills



SCENARIO: **TWO**

You have been hired to build a photography platform 12ft (3.65m) above and across this motorcycle track for an upcoming 3 day race. The track is 25ft (7.62m) wide and there is 8ft (2.43m) of grass and compacted soil on either side of the track. The anticipated load on the platform is 10 - 12 photographers and their equipment.

SCENARIO SUMMARY:

WORK/ACTIVITY: *Photo/video of race*

TYPE & SHAPE OF STRUCTURE: *Outdoor race track 25ft (7.62m) wide*

CONDITIONS: *Outdoor use, grass/compacted soil foundation*

DURATION: *3 days*

LOADS: *10 - 12 photographers + equipment*

SCENARIO QUESTIONS

CHOOSE THE BEST ANSWER:

24. What System Scaffold component(s) are used to span wider openings and support platforms?

- a) Runners
- b) Sidebrackets
- c) Lattice Girders

25. What type of protection must you provide for the users of the platform?

- a) Enclose the scaffold to protect from bad weather
- b) Install guardrails on all open sides and ends of the platform.
- c) Install a catch platform below the scaffold

26. How will you make sure the scaffold won't "sink" into the ground if it rains?

- a) Use appropriate size sills beneath the baseplates
- b) Pour a concrete foundation below the scaffold
- c) Spread plastic sheets under the scaffold

27. The configuration of this scaffold will be two towers connected together to install a platform across the track. This type of scaffold is called....

- a) A bridging scaffold
- b) A birdcage scaffold
- c) A hanging scaffold

28. What information could you expect to find in the sketch of this scaffold?

- a) Elevations
- b) Manufacturer's specifications
- c) Equipment list

29. The race organizers want to hang plastic promotional banners on the scaffold. How might this affect the scaffold?

- a) The scaffold could be subjected to greater horizontal loads due to wind.
- b) The weight of the banners could cause the scaffold to collapse.
- c) The banners could damage the surfaces of the scaffold posts.



SCENARIO:
THREE

The owner of this building wants to replace the window that is currently filled in with bricks. Workers must remove the existing bricks, repair and replace the window frame and install a new window. The bottom of the window is 20ft (6m) from the sidewalk

SCENARIO SUMMARY:

WORK/ACTIVITY: *Remove bricks, repair window frame, install new window*

TYPE & SHAPE OF STRUCTURE: *Brick building - no obstructions*

CONDITIONS: *Flat concrete sidewalk foundation - outdoor use possibility of pedestrians using sidewalk.*

DURATION: *2 days*

LOADS: *Up to 800lbs (363kg) of bricks, two workers, & tools*

SCENARIO QUESTIONS:

TRUE OR FALSE?

- 30. Tying your scaffold to the wall will help it support heavier loads.**
- a) True
 - b) False
- 31. Loads include total weight of all workers, equipment, tools & materials, plus environmental weight and forces.**
- a) True
 - b) False
- 32. The concrete sidewalk will support the load - especially if sills are used under baseplates.**
- a) True
 - b) False
- 33. Side brackets may only be used to support workers.**
- a) True
 - b) False

SCENARIO QUESTIONS:

CHOOSE BEST ANSWER

- 34. How will you determine if your platform materials can support the weight of the bricks and workers?**
- a) Check manufacturer's specifications for the load rating (maximum capacity) of the product
 - b) Check for signs of overloading
 - c) Get platform materials that are rated "Heavy Duty"
- 35. How will you prevent the bricks from falling onto workers or pedestrians below the scaffold?**
- a) Install side brackets or end brackets to extend the platform
 - b) Pile the bricks carefully on the scaffold as they are removed
 - c) Barricade the space below and install toeboards and/or screening
- 36. If your scaffold needs to be tied for stability, where do the ties need to be placed?**
- a) In the vertical and horizontal locations required by local regulations
 - b) At the top lift and both sides of the scaffold
 - c) At every third lift and every second bay horizontally



SCENARIO:

FOUR:

This 38ft (11.58m) tank needs to be sandblasted and re-painted. There is limited space on one side due to the adjacent building. A crew of three men will be required to sandblast and re-paint the tank over a period of two weeks. The loads will include the men and their materials/equipment. The foundation is a combination of compacted soil and gravel and is uneven in places.

SCENARIO SUMMARY:

WORK/ACTIVITY: *Sandblasting & re-painting*

TYPE & SHAPE OF STRUCTURE: *Circular tank with limited access on one side.*

CONDITIONS: *Outdoor use. Compacted soil and gravel surface.*

DURATION: *2 weeks*

LOADS: *3 men + sandblasting and painting materials/equipment.*

SCENARIO

CHOOSE THE BEST ANSWER:


- 37. Due to obstacles and limited space, around the tank which type of scaffold would be *least* suitable for this job?**
- a) Tube & Clamp Scaffold
 - b) System Scaffold
 - c) Frame Scaffold
- 38. Before you can build the scaffold what do you have to do?**
- a) Make sure the area where the scaffold is to be built is clear and nothing is in the way.
 - b) Excavate the soil and replace with crushed stone.
 - c) Attach a red tag so workers know the scaffold is not ready to use.
- 39. The foundation is uneven. What will you need to make the scaffold level?**
- a) Screwjacks
 - b) Wood or bricks for blocking or packing
 - c) Extension tubes with baseplates
- 40. What System Scaffold component(s) provides lateral bracing and also helps to set up and level the base?**
- a) Screwjacks
 - b) Base collars
 - c) Plan brace
- 41. How is the load transferred to the ground in a System Scaffold?**
- a) Through the bearer to the sill
 - b) Through the diagonal braces
 - c) Through the post to the sill
- 42. Why are the majority of parts of a system scaffold made from 1.9in (48.3mm) outside diameter tubes?**
- a) To enable the user to mix parts from different manufacturers
 - b) So they can be used with Tube & Clamp fittings
 - c) So steel and aluminum tubes can be used together on the same scaffold.

SCENARIO:

FIVE:

This ship is in dry dock for 3 months for repairs and re-painting. A crew of 12 men will be working on different areas of the hull at the same time so there needs to be working platforms at several different levels. The loads will include the men, their welding and painting equipment and materials.

110ft
(33.5m)

A large cargo ship is shown in a dry dock. The ship's hull is painted in two colors: a light blue upper section and a dark red lower section. A vertical blue line with arrows at both ends indicates the height of the blue section, which is labeled as 110ft (33.5m). The ship is supported by a central vertical post. The background shows the industrial structure of the dry dock under a blue sky with scattered clouds.

SCENARIO SUMMARY:

Work/activity: *Repair and repaint ship*

Structure: *Curved ship hull*

Conditions: *Exterior dry dock, smooth flat concrete foundation*

Duration: *3 months*

Loads: *Welding and painting equipment + 20 workers*

SCENARIO QUESTIONS:

TRUE OR FALSE?

- 43. System Scaffolds can only be built on a smooth, dry and level foundation.**
- a) True
 - b) False
- 44. System Scaffold can be built around irregular-shaped structures because the verticals and horizontals come in different lengths.**
- a) True
 - b) False
- 45. The concrete foundation will be able to support the anticipated loads.**
- a) True
 - b) False
- 46. You can provide weather protection for the workers by enclosing the scaffold.**
- a) True
 - b) False

SCENARIO QUESTIONS:

CHOOSE BEST ANSWER

- 47. You can't attach scaffold ties to the ship. What can you do to ensure the scaffold will be stable?**
- a) Extend the width of the scaffold base.
 - b) Use casters with double-acting brakes.
 - c) Attach horizontal diagonal braces in every third bay.
- 48. You will use a scaffold hoist to get components to the upper lifts. What precautions must you take?**
- a) Install a canopy structure beneath the scaffold in case any equipment falls.
 - b) Compensate for the overturning forces imposed on the scaffold by the hoist.
 - c) Make sure the hoist uses 16 gauge (1.29 mm diameter) wire ropes.
- 49. How will you determine the bracing requirements for the System Scaffold you need to build?**
- a) Follow manufacturer's instructions regarding bracing requirements for your scaffold equipment.
 - b) By first determining the maximum bay width.
 - c) Bracing should be in every second bay horizontally.



USE IT OR LOSE IT?

Inspect the system scaffold components in the pictures above, read the questions below and decide if they are safe to use.

50. PICTURE A: This V-Lock System Scaffold member is very rusty. Should it be used?

- a) YES
- b) NO

51. PICTURE B: The components below this platform show signs of corrosion. Is this scaffold safe to use?

- a) YES
- b) NO

52. PICTURE C: The baseplate on this screwjack is curled upwards in one corner - should you use it?

- a) YES
- b) NO



HAZARDS



CHOOSE THE BEST ANSWER:

53. **PICTURE A:** What serious hazard(s) can you see in this photo?

- a) Electrical Hazard
- b) Unstable foundation
- c) Fall Hazard & Unsafe Access

54. **PICTURE B:** Why is this considered unsafe access?

- a) The ladder is not securely attached to the scaffold.
- b) The worker is not climbing with three points of contact
- c) The worker isn't wearing personal fall arrest equipment.

55. **PICTURE C:** What is the main hazard in this image ?

- a) The toeboard is not secured to the posts.
- b) The scaffold is not tied to the structure.
- c) The baseplate is not bearing on a stable foundation.