SAIA SCAFFOLD & ACCESS INDUSTRY ASSOCIATION

FRAME SCAFFOLD

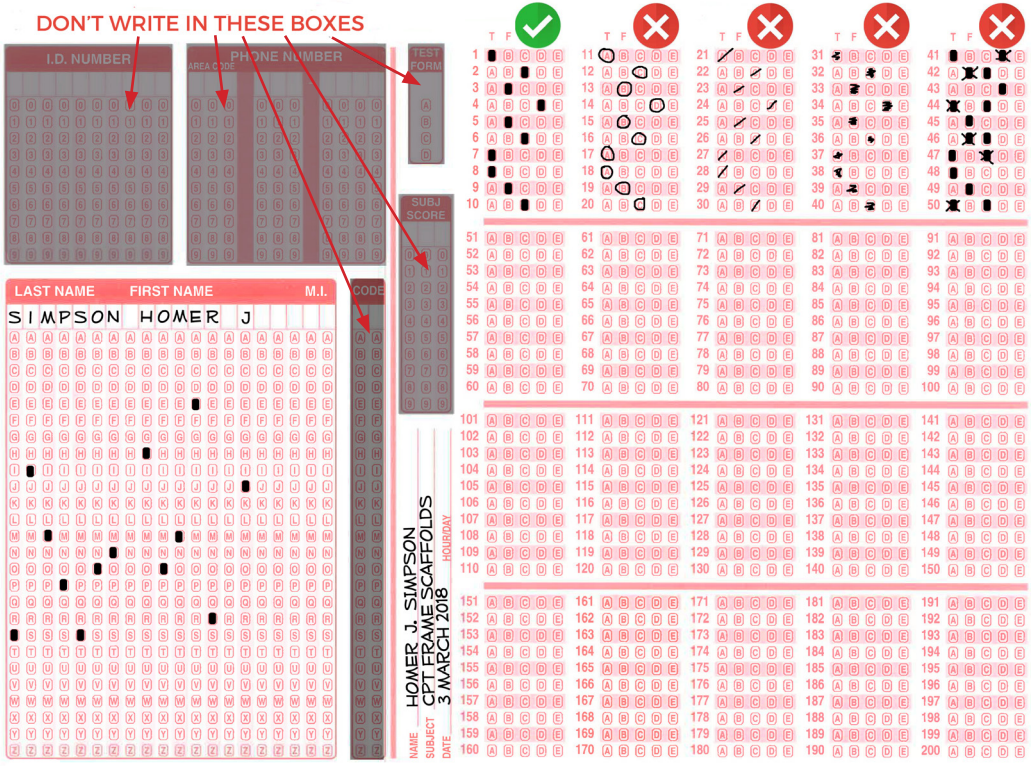
COMPETENT PERSON TRAINING

VERSION 11•18

EXAM

INSTRUCTIONS
IMPORTANT!

Read these instructions carefully before you start the exam.



- 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.**

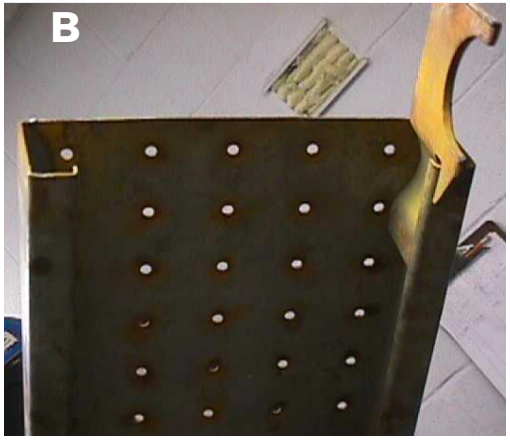
   a) TRUE
   b) FALSE

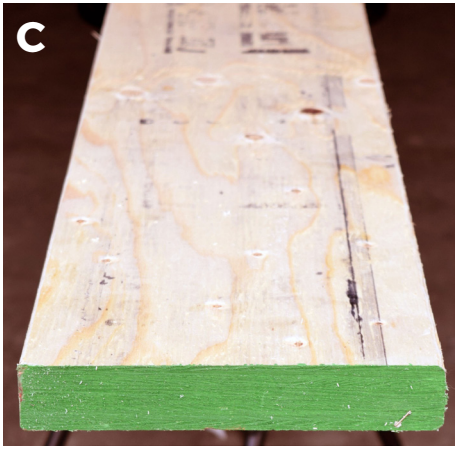
7. **If a scaffold's foundation is uneven, you can use bricks, pieces of wood or scrap material under baseplates or sills as blocking or packing.**

   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

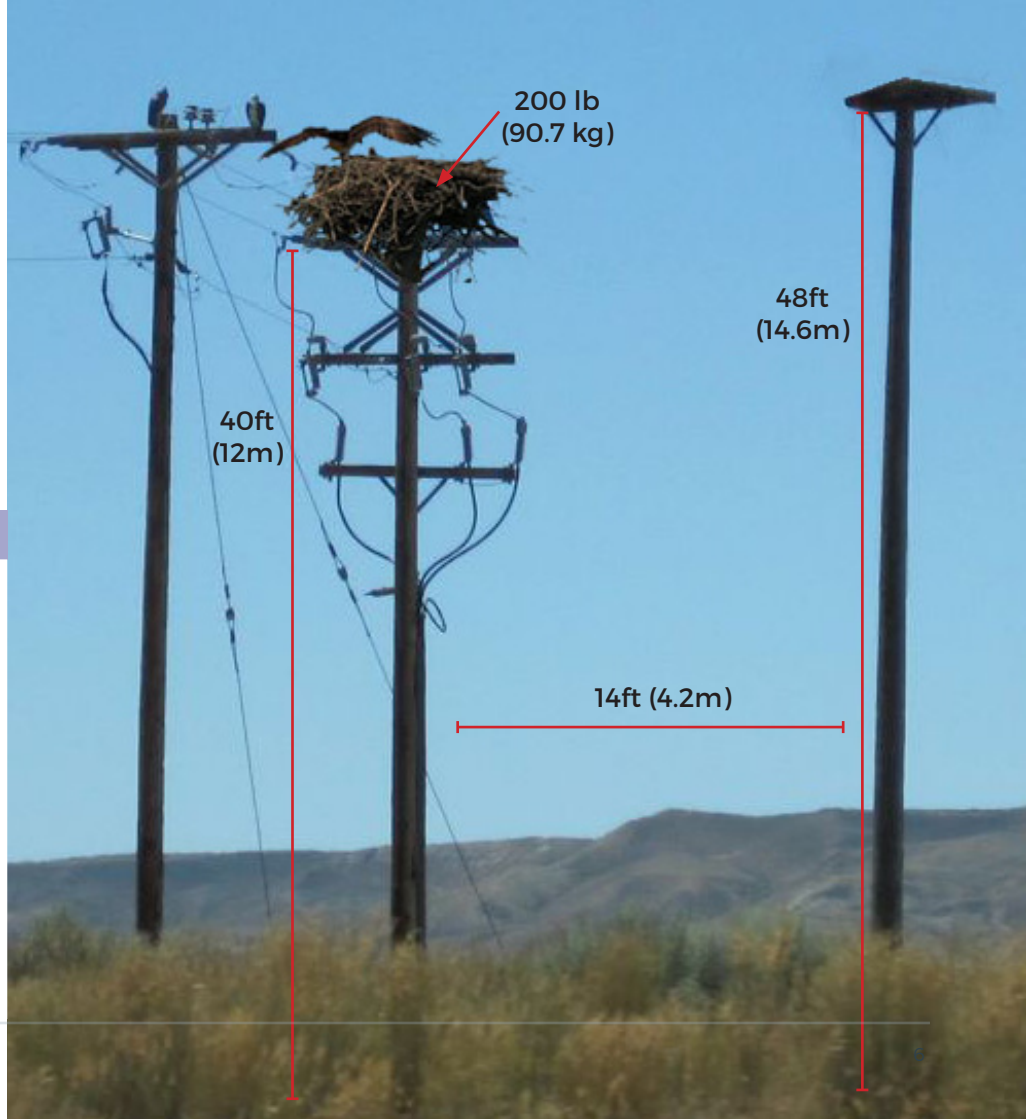
SCENARIO:

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



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

The owner of this warehouse wants to replace all the lightbulbs with high-efficiency (longer-lasting) LED bulbs. The work has to be done within two weeks but there are constantly trucks moving in and out and forklifts. Only one worker is needed to replace the bulbs but another is needed to safeguard the scaffold while it is being used.

SCENARIO SUMMARY:

WORK/ACTIVITY:	*Change lightbulbs*
TYPE & SHAPE OF STRUCTURE:	*Warehouse,*
CONDITIONS:	*Indoor use - smooth flat concrete floor, forklifts and trucks moving in and out*
DURATION:	*2 weeks*
LOADS:	*One worker and box of lightbulbs*

SCENARIO QUESTIONS

CHOOSE THE BEST ANSWER:

24. What is the best scaffold configuration for the situation in this scenario?

a) Area Scaffold

b) Rolling Tower Scaffold

c) Scaffold Run

25. What components are needed for the base of the scaffold?

a) Baseplates

b) Screwjacks and sills

c) Casters

26. What component(s) will keep the scaffold square and prevent it from racking (folding up) while it is being moved?

a) Crossbraces

b) Plan Brace (Horizontal Diagonal Brace)

c) Outriggers

27. If the minimum base dimension of your scaffold is 5ft and the scaffold is 22ft high what must you do to make it stable?

a) Attach outriggers to widen the base

b) Use sills to distribute the load

c) Ensure the casters are lockable

28. What is the maximum a screwjack should be extended if used with casters?

a) 12in (305mm)

b) 14in (355.6mm)

c) 10in (254mm)

29. Why is it important to square your scaffold?

a) So you can properly install toeboards on all sides and ends of the platform

b) So the scaffold will be level and plumb

c) So the platform can be fully-planked and crossbraces can be properly installed

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

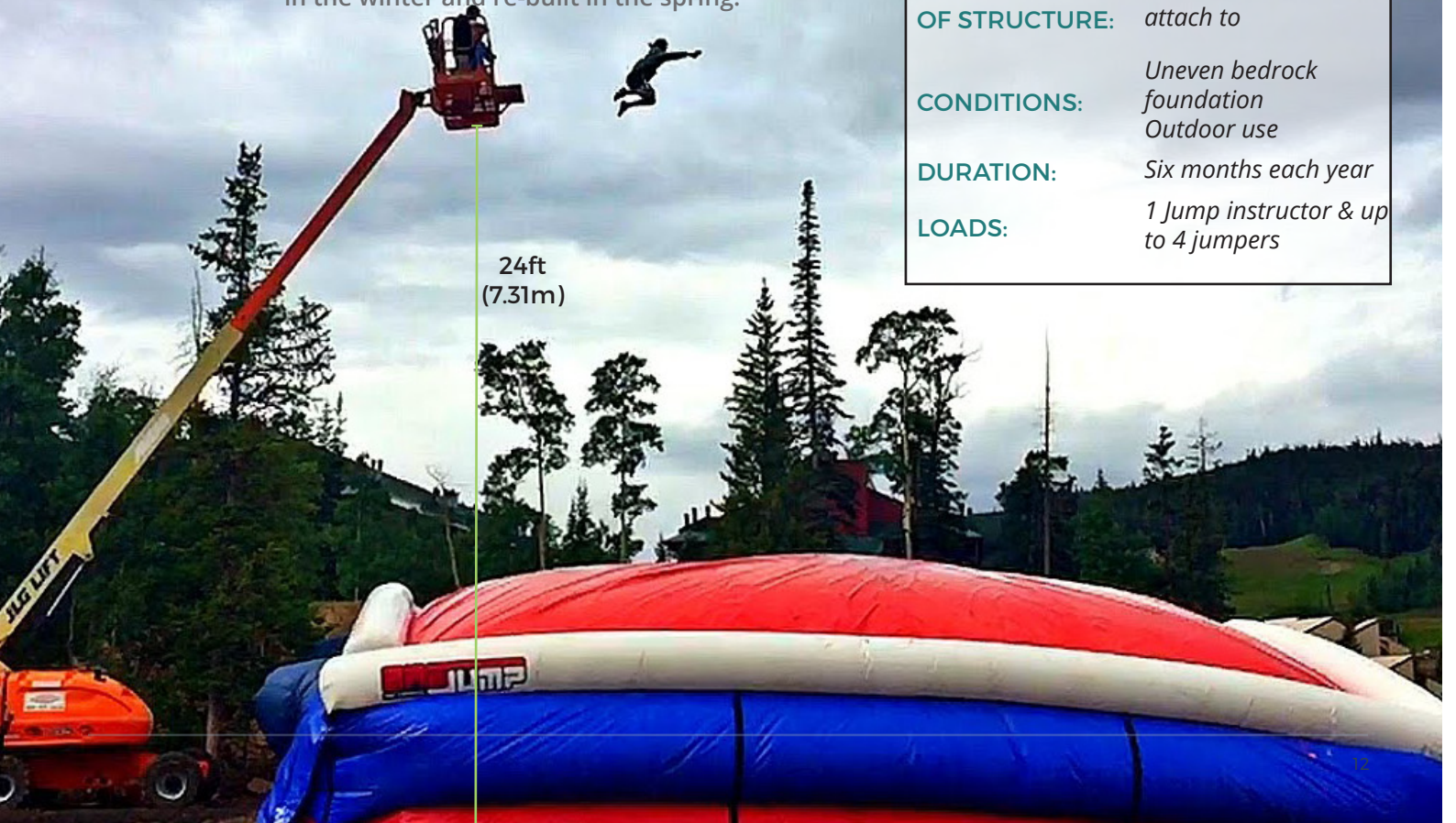
b) At the top lift and both sides of the scaffold

c) At every third lift and every second bay horizontally

SCENARIO:

FOUR:

Stan's Stunt School wants to replace their "cherry picker" with a scaffold tower to jump from. Stan wants to be able to take up to 4 jumpers at one time. He would like his jump platform to be 24ft (7.31m) high. The school operates 6 months of the year so the tower must be dismantled by his staff in the winter and re-built in the spring.



SCENARIO SUMMARY:

WORK/ACTIVITY:	*Practice stunt jumping from 24ft (7.31m)*
TYPE & SHAPE OF STRUCTURE:	*No stable structure to attach to*
CONDITIONS:	*Uneven bedrock foundation* *Outdoor use*
DURATION:	*Six months each year*
LOADS:	*1 Jump instructor & up to 4 jumpers*

SCENARIO

CHOOSE THE BEST ANSWER:

37. Stan's workers don't have much experience/ expertise building scaffolds. Which is the best type of scaffold for them to use for this tower?

a) Tube & Clamp Scaffold

b) System Scaffold

c) Frame Scaffold

38. Before you can build the scaffold tower what needs to be done?

a) Evaluate the foundation to determine if it can support the scaffold and intended loads

b) Put up a barricade around the area where the scaffold will be built

c) Ensure there is a stable structure the tower can be tied to

39. The bedrock foundation is uneven. What will you need to make the scaffold level?

a) Screwjacks to adjust the height

b) Wood or bricks for blocking or packing

c) Excavate then fill with gravel or crushed stone

40. If Stan wanted to extend the jump platform beyond the uprights what component(s) could be used?

a) Stringers and joists

b) Side or end brackets

c) A putlog

41. The scaffold tower exceeds the allowable height-to-base ratio, what is the best option for Stan's crew to stabilize this scaffold?

a) Install a tie from the scaffold to the closest largest tree

b) Use two guy wires to anchor it to the ground

c) Install outriggers to widen the base of the tower

42. When you compare the height-to-base ratio what base dimension must you use?

a) The smaller base dimension

b) The larger base dimension

c) A combination of both

SCENARIO:

FIVE:

The vaulted ceiling of this old church must be reinforced with steel beams. The work will be carried out from the main floor (there is a basement below). The work platform must be large enough to assemble the steel beam reinforcments which, when assembled, are as wide as the church. The work will take place over 2 weeks and there will be up to 5 workers using the scaffold at one time.

SCENARIO SUMMARY:

Work/activity:	*Reinforce ceiling*
Structure:	*Church w/high ceiling*
Conditions:	*Interior use, wood floor*
Duration:	*2 weeks*
Loads:	*Steel beams + 5 workers*

SCENARIO QUESTIONS:

TRUE OR FALSE?

43. An area scaffold would be best suited for this job.

a) True

b) False

44. A Frame Scaffold unit will be stable as long as one side of the bay is braced.

a) True

b) False

45. It is possible to build a scaffold with a platform that spans the entire width of the church

a) True

b) False

46. Tube & Clamp Scaffolds are best suited for the required scaffold configuration.

a) True

b) False

SCENARIO QUESTIONS:

CHOOSE BEST ANSWER

47. What must you do before building a scaffold on a wood floor?

a) Find out how much load the floor can support

b) Make sure the floor is completely level

c) Make sure there are no large gaps between the floor boards

48. If you wanted to build a putlog scaffold what must you find out?

a) Whether there is a stable anchor point accessible

b) Allowable loading on putlogs and bracing requirements

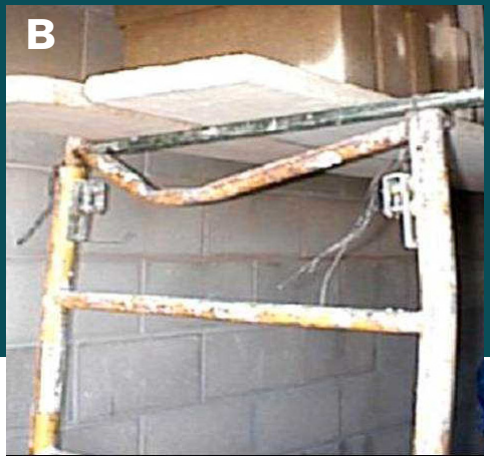
c) Whether scaffold grade planks or plywood will be used for the platform

49. How will you determine if the scaffold platform can support the weight of the steel beams?

a) Check the platform unit manufacturer's specifications to find out the maximum capacity of their product

b) Multiply the width of the platform unit by the length and divide by 75psf.

c) Use platform units that are rated as "Heavy Duty"



USE IT OR LOSE IT?

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

50. PICTURE A: This scaffold frame has a dented rung. Should it be used?

a) YES

b) NO

51. PICTURE B: Workers have attached a metal tube to substitute the bent frame. Is this scaffold safe to use?

a) YES

b) NO

52. PICTURE C: The adjustment handle on this screwjack moves freely but has some rust - is it ok to use it?

a) YES

b) NO

HAZARDS

CHOOSE THE BEST ANSWER:

53. PICTURE A: What scaffold component could have prevented this falling object hazard?

a) Midrail

b) Crossbrace

c) Toeboard

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

a) Crossbraces are not made to be climbed

b) The worker is not climbing with three points of contact

c) The worker isn't wearing personal fall protection equipment

55. PICTURE C: The correct way to handle this situation is...?

a) Nail all the boards together

b) Set the baseplate centrally on the top board

c) Consult a Qualified Person for advice on how to remedy unstable earth conditions