

# OSHA INTERVIEW QUESTIONS - CRANE AND DERRICKS

*Source: [www.hsevision.net](http://www.hsevision.net)*

**1. Hoisting personnel is generally prohibited unless the employer demonstrates that conventional means of reaching the work area would be more hazardous or is not possible due to structural design or worksite conditions.**

- A. True, the rule has no exceptions.
- B. False, hoisting is always permitted if a personnel platform is used.
- C. True, hoisting is prohibited except for specific, demonstrated exceptions.
- D. False, the criteria only require a qualified person to supervise the lift.

**Correct Answer: C**

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**2. Which of the following operations is NOT listed as an exception where an employee may be hoisted without a personnel platform?**

- A. In pile driving operations.
- B. Hoisting materials for structural construction.
- C. Solely for transfer to or from a marine worksite.
- D. Into and out of drill shafts that are 8 feet in diameter or smaller.

**Correct Answer: B**

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**3. Who is required to design the personnel platform and its attachment/suspension system used for hoisting personnel?**

- A. A certified welder.
- B. The equipment operator.
- C. A qualified person familiar with structural design.
- D. The person responsible for the task.

**Correct Answer: C**

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**4. The system used to connect the personnel platform to the equipment must allow the platform to remain within what angular tolerance, regardless of boom angle?**

- A. 5 degrees of level.
- B. 15 degrees of level.
- C. 10 degrees of level.
- D. 20 degrees of level.

**Correct Answer: C**

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**5. Excluding the guardrail system and personal fall arrest system anchorages, the personnel platform itself must be able to support, without failure, its own weight and at least how many times the maximum intended load?**

- A. Three times.
- B. Five times.
- C. Four times.
- D. Twice.

**Correct Answer: B**

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**6. Who must perform all welding of the personnel platform and its components?**

- A. A certified welder familiar with the specified weld grades, types, and material.
- B. A competent person as determined by the employer.
- C. Any welder with basic certification.
- D. The equipment manufacturer's representative.

**Correct Answer: A**

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**7. The guardrail system on a personnel platform must be enclosed at least from the toeboard to mid-rail with solid construction material or expanded metal having openings no greater than what size?**

- A. 1 inch.
- B. 1/4 inch.
- C. 1/2 inch.
- D. 3/4 inch.

**Correct Answer: C**

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**8. In general, access gates/doors on a personnel platform are prohibited from swinging in which direction?**

- A. Sliding open.
- B. Swinging outward.
- C. Folding inward.
- D. Swinging inward.

**Correct Answer: B**

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**9. What is the minimum requirement for headroom on a personnel platform?**

- A. 6 feet 8 inches.

- B. Sufficient to allow employees to stand upright in the platform.
- C. At least 8 feet.
- D. One foot above the tallest employee's head.

**Correct Answer: B**

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**10. In addition to hard hats, when is overhead protection required on the personnel platform?**

- A. At all times.
- B. Only during inclement weather.
- C. When employees are exposed to falling objects.
- D. Only when lifting materials heavier than 100 pounds.

**Correct Answer: C**

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**11. What two items must be conspicuously posted on the personnel platform with a plate or other permanent marking?**

- A. The date of the last inspection and the names of the certified welders.
- B. The minimum load and the manufacturer's serial number.
- C. The weight of the platform and its rated capacity.
- D. The names of all occupants and the weight of the rigging.

**Correct Answer: C**

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**12. Personnel platforms must be used only for employees, their tools, and what else?**

- A. Extra personal belongings.
- B. The materials necessary to do their work.
- C. Lunch boxes and water coolers.
- D. Materials not exceeding 50 pounds.

**Correct Answer: B**

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**13. When hoisting personnel, the hoisting equipment must be uniformly level, within what percentage of level grade?**

- A. Within two percent of level grade.
- B. Within one percent of level grade.
- C. Within five percent of level grade.
- D. Within ten percent of level grade.

**Correct Answer: B**

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**14. For equipment with outriggers or stabilizers, the amount of extension must be the same for all and in accord with what?**

- A. The equipment operator's best judgment.
- B. The maximum possible extension.
- C. Manufacturer procedures and load charts.
- D. The competent person's directive.

**Correct Answer: C**

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**15. The total load (including the hook, load line and rigging) must not exceed what percentage of the rated capacity for the radius and configuration of the equipment (except during proof testing)?**

- A. 75 percent.
- B. 50 percent.
- C. 66 percent.
- D. 100 percent.

**Correct Answer: B**

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**16. When the occupied personnel platform is in a stationary working position, which braking/locking features must be engaged?**

- A. Only the load hoist brake.
- B. The swing brake and the travel brake.
- C. Load and boom hoist brakes, swing brakes, and operator actuated secondary braking/locking features.
- D. Only the main power lock-out switch.

**Correct Answer: C**

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**17. Immediately after the trial lift, who must visually inspect the equipment, base support or ground, and personnel platform?**

- A. The equipment operator.
- B. A registered professional engineer.
- C. The person responsible for the task.
- D. A competent person.

**Correct Answer: D**

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**18. Prior to hoisting employees and after any repair or modification, the platform and rigging must be proof tested to what percentage of the platform's rated capacity?**

- A. 100 percent.
- B. 125 percent.
- C. 110 percent.
- D. 150 percent.

**Correct Answer: B**

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**19. Personnel hoisting must not be conducted until a competent person determines what?**

- A. The equipment has new wire rope.
- B. The wind speed is zero.
- C. The trial lift has been performed.
- D. The platform and rigging have successfully passed the proof test.

**Correct Answer: D**

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**20. How must the hoisting of the personnel platform be performed?**

- A. As quickly as possible to minimize exposure time.
- B. In a slow, controlled, cautious manner, with no sudden movements.
- C. With smooth, rapid movements of the equipment.
- D. Only in high gear to ensure stability.

**Correct Answer: B**

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**21. Platform occupants must NOT do which of the following during raising, lowering, and horizontal movement?**

- A. Remain inside the platform.
- B. Use a personal fall arrest system.
- C. Keep all parts of the body inside the platform.
- D. Stand, sit on, or work from the top or intermediate rail or toeboard.

**Correct Answer: D**

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**22. Before employees exit or enter a hoisted personnel platform that is not landed, what must be done, unless it creates a greater hazard?**

- A. The operator must engage the swing lock.
- B. The platform must be secured to the structure where the work is to be performed.
- C. The boom must be fully extended.
- D. Tag lines must be removed.

**Correct Answer: B**

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**23. Where the personnel platform is not equipped with controls, the equipment operator must remain at the equipment controls, on site, and in view of the equipment:**

- A. Until the platform reaches the work area.
- B. At all times while the platform is occupied.
- C. Only during the initial lift.
- D. Until the signal person takes over communication.

**Correct Answer: B**

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**24. If the personnel platform is equipped with controls, the equipment operator must be at a set of equipment controls that include which of the following functions?**

- A. Hoist and travel functions.
- B. Boom and swing functions.
- C. Trolley and rail functions.
- D. All functions except for hoisting.

**Correct Answer: B**

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**25. When must a qualified person determine if it is safe to lift personnel due to wind conditions?**

- A. When sustained winds exceed 15 mph.
- B. When wind speed (sustained or gusts) exceeds 20 mph at the personnel platform.
- C. When a hurricane warning is issued.
- D. When the platform is over 100 feet in the air.

**Correct Answer: B**

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**26. Employees being hoisted must remain in direct communication with whom?**

- A. The person responsible for the task.
- B. The site safety manager.
- C. The structural engineer.
- D. The signal person (where used) or the operator.

**Correct Answer: D**

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**27. Except over water, where must employees occupying the personnel platform attach their personal fall arrest system?**

- A. To the nearest suitable structure.
- B. To the hoist line.
- C. To a structural member within the personnel platform.
- D. To the outside guardrail.

**Correct Answer: C**

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**28. While personnel are being hoisted, lifts may not be made on any other of the equipment's load lines, except in which type of operation?**

- A. Drill shaft operations.
- B. Marine transfer operations.

- C. Storage tank operations.
- D. Pile driving operations.

**Correct Answer: D**

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**29. Which type of equipment is strictly prohibited from traveling while personnel are hoisted under all circumstances?**

- A. Lattice boom cranes.
- B. Tower cranes.
- C. Derricks.
- D. Hydraulic cranes.

**Correct Answer: C**

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**30. Which person is NOT required to attend the pre-lift meeting?**

- A. The site General Foreman.
- B. The equipment operator.
- C. Employees to be hoisted.
- D. The person responsible for the task to be performed.

**Correct Answer: A**

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**31. Hoisting personnel is prohibited within how many feet of a power line that is up to 350 kV (except for power transmission work)?**

- A. 10 feet.
- B. 20 feet.
- C. 30 feet.
- D. 50 feet.

**Correct Answer: B**

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**32. When more than one crane or derrick is used to support the load (multiple-crane/derrick lift), what must be developed and implemented?**

- A. An emergency evacuation plan.
- B. A written agreement with the property owner.
- C. A plan designed by a qualified person.
- D. A single designated spotter.

**Correct Answer: C**

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**33. The multiple-crane/derrick lift must be directed by a lift director who meets the criteria for both what?**

- A. An A/D director and a certified welder.
- B. A competent person and a qualified person.
- C. A registered professional engineer and a competent person.
- D. The equipment operator and a signal person.

**Correct Answer: B**

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**34. The crane user's obligations regarding equipment design, construction, and testing are met if they refer to manufacturer documentation, provided the equipment has not changed except in accord with which section?**

- A. Section 1435 - Tower Cranes.
- B. Section 1431 - Hoisting Personnel.
- C. Section 1434 - Equipment Modifications.
- D. Section 1436 - Derricks.

**Correct Answer: C**

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**35. Which of the following must be available in the cab of the equipment?**

- A. The operator's training certificate.
- B. A complete range of the manufacturer's equipment rated capacities.
- C. The manufacturer's contact information.
- D. A detailed maintenance log for the last month.

**Correct Answer: B**

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**36. Load hooks must be equipped with latches, except when a qualified person determines what?**

- A. The load is too heavy for the latch.
- B. The lift is made over water.
- C. It is safer to hoist and place the load without latches and routes are pre-planned.
- D. The operator is highly experienced.

**Correct Answer: C**

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**37. Posted warnings required by the standard and those originally supplied by the manufacturer must be maintained in what condition?**

- A. Protected by a weatherproof covering.
- B. Recently updated with the latest revisions.
- C. In legible condition.
- D. In both English and Spanish.

**Correct Answer: C**

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**38. If the equipment's manufacturer is available and willing to evaluate a proposed modification, what is the prerequisite for the modification to be permitted?**

- A. Approval from the site safety manager.
- B. The manufacturer approves the modifications/additions in writing.
- C. A load test to 125% of rated capacity.
- D. A registered professional engineer's stamp.

**Correct Answer: B**

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**39. If the manufacturer is unavailable or unresponsive to a modification request within a specified timeframe, who may approve the modification/addition?**

- A. The competent person.
- B. The Assembly/Disassembly (A/D) director.
- C. A registered professional engineer who is a qualified person with respect to the equipment.
- D. The equipment owner.

**Correct Answer: C**

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**40. Under all modification approval options, what aspect of the equipment may NOT be reduced?**

- A. The overall height of the boom.
- B. The original safety factor of the equipment.
- C. The maximum number of parts of line.
- D. The maximum rated capacity.

**Correct Answer: B**

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**41. Tower crane foundations and structural supports must be designed by the manufacturer or whom else?**

- A. The Assembly/Disassembly (A/D) director.
- B. The site Superintendent.
- C. A registered professional engineer.
- D. A competent person.

**Correct Answer: C**

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**42. Who must determine that tower crane foundations and structural supports are installed in accord with their design?**

- A. A registered professional engineer.
- B. The Assembly/Disassembly (A/D) director.

- C. The equipment operator.
- D. The manufacturer's representative.

**Correct Answer: B**

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**43. If the manufacturer does not specify plumb tolerance for a tower, what is the required minimum tolerance?**

- A. 1:250 (approximately 1 inch in 20 feet).
- B. 1:100 (approximately 1 inch in 8 feet).
- C. 1:500 (approximately 1 inch in 40 feet).
- D. 1:1000 (approximately 1 inch in 80 feet).

**Correct Answer: C**

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**44. Prior to and during all climbing procedures for a tower crane, who must verify that the host structure is strong enough to sustain the forces imposed?**

- A. A certified inspector.
- B. The A/D Director.
- C. A registered professional engineer.
- D. The site foreman.

**Correct Answer: C**

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**45. The maximum counterweight and/or ballast specified by the manufacturer or registered professional engineer must be what?**

- A. Used for the entire lift.
- B. Adjusted for wind conditions.
- C. Posted prominently.
- D. Not exceeded.

**Correct Answer: D**

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**46. Which of the following is a safety device that must automatically set in the event of pressure loss or power failure on a tower crane?**

- A. An anemometer.
- B. A hoist brake.
- C. A load moment limiting device.
- D. An anti two-blocking device.

**Correct Answer: B**

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**47. For derricks that are NOT permanently installed, where must the load chart be readily available?**

- A. In the operator's home office.
- B. On the manufacturer's website.
- C. Readily available at the job site to personnel responsible for operating the equipment.
- D. Posted on the main company bulletin board.

**Correct Answer: C**

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**48. New hoists for derricks must be load tested to a minimum of what percentage of rated capacity?**

- A. 90 percent.
- B. 100 percent.
- C. 110 percent.
- D. 125 percent.

**Correct Answer: C**

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**49. Who must test new or reinstalled derricks prior to initial use with no hook load to verify proper operation (functional test)?**

- A. The equipment operator.
- B. A registered professional engineer.
- C. The manufacturer.
- D. A competent person.

**Correct Answer: D**

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**50. When conducting a trial lift for personnel hoisting, the unoccupied personnel platform must be loaded to at least what weight?**

- A. 50 percent of the rated capacity.
- B. The maximum intended load.
- C. The anticipated lift weight.
- D. 125 percent of the rated capacity.

**Correct Answer: C**

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**51. What is the maximum allowed opening size for expanded metal or solid construction material used to enclose the area from the toeboard to mid-rail on a personnel platform?**

- A. 3/4 inch
- B. 1 inch
- C. 1/4 inch

D. 1/2 inch

**Correct Answer: D**

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