

OSHA INTERVIEW QUESTIONS - CRANE AND DERRICKS

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1. What does "rated capacity" mean in the context of crane operations?

- A. The crane's operating weight plus the maximum load it can lift.
- B. The maximum working load permitted by the manufacturer under specified working conditions.
- C. The maximum load determined by the site's qualified person for a specific lift.
- D. The maximum load the crane's hoist rope is rated for.

Correct Answer: B

2. Adequate ground conditions are essential for safe crane operations because the crane's capacity and what other factor depend on such conditions?

- A. Boom length
- B. Stability
- C. Fuel level
- D. Hoisting speed

Correct Answer: B

3. What is the basic rule for ground conditions required before assembling or using a crane?

- A. The ground must be compact and completely dry.
- B. The ground must be firm, drained, and graded to a sufficient extent.
- C. The ground must be able to support twice the crane's maximum rated capacity.
- D. The ground must be covered with at least 6 inches of crushed stone.

Correct Answer: B

4. For which type of site does the requirement for the ground to be drained NOT apply?

- A. Temporary access roads
- B. Paved roads and parking lots
- C. Marshes/wetlands
- D. Excavation sites

Correct Answer: C

5. Who holds the primary responsibility for ensuring that ground conditions are adequate at a construction site?

- A. The employer that leases the crane
- B. The crane operator
- C. The prime contractor, general contractor, or other 'controlling entity'
- D. The most senior worker on the lift crew

Correct Answer: C

6. What specific hazards beneath the equipment set-up area must the controlling entity inform the user and operator about, if identified in possession documents?

- A. High wind zones
- B. Voids, tanks, and utilities
- C. Hidden historical artifacts
- D. Adjacent property boundary lines

Correct Answer: B

7. If there is no controlling entity for a project, the responsibility for providing adequate ground conditions rests on whom?

- A. The employer who owns the crane.
- B. The company that supplies the supporting materials (mats/blocking).
- C. The employer that has authority at the site to make or arrange for ground preparations.
- D. A state or federal occupational safety and health agency.

Correct Answer: C

8. If the company operating the crane decides ground conditions are inadequate, what must they do before beginning or continuing operations?

- A. Immediately cease all operations and leave the site.
- B. Begin ground preparation work immediately.
- C. Discuss the problem with the controlling entity and see that the problem is corrected.
- D. Contact the equipment manufacturer for alternative setup specifications.

Correct Answer: C

9. Accidents during assembly and disassembly are one of the major causes of crane-related fatalities, particularly for which two types of cranes?

- A. Mobile hydraulic and articulating cranes
- B. Rough terrain and all terrain cranes
- C. Lattice boom and tower cranes

D. Carry deck and boom truck cranes

Correct Answer: C

10. When assembling or disassembling a crane, an employer must comply with either manufacturer procedures or which other type of procedures?

- A. Procedures developed by a registered professional engineer.
- B. Procedures developed by a qualified person employed by the employer.
- C. Procedures approved by a certified crane inspector.
- D. Procedures from a recognized industry trade association.

Correct Answer: B

11. At a minimum, employer-developed assembly/disassembly procedures must prevent what?

- A. Damage to the equipment's paint or finish.
- B. Unintended dangerous movement or collapse of any part of the equipment.
- C. Work from occurring in wind speeds greater than 20 mph.
- D. The assembly from taking more than one working day.

Correct Answer: B

12. Employer-developed A/D procedures must ensure what for all parts of the equipment?

- A. Easy access for maintenance and inspection.
- B. A high-visibility yellow paint coating.
- C. Adequate support and stability.
- D. Protection from ultraviolet radiation.

Correct Answer: C

13. Employer-developed A/D procedures must position employees to minimize their exposure to what specific hazard?

- A. Prolonged sun exposure.
- B. Excessive noise levels.
- C. Unintended movement or collapse of part or all of the equipment.
- D. Repetitive motion injuries.

Correct Answer: C

14. The Assembly/Disassembly (A/D) director must meet the criteria for which two types of individuals?

- A. A first-aid responder and a lift supervisor.
- B. A competent person and a qualified person.

- C. A professional engineer and a licensed operator.
- D. A certified welder and a rigging specialist.

Correct Answer: B

15. As a precaution, the A/D director must ensure the site and ground conditions are able to support the equipment during what phase of the operation?

- A. Only during the maximum pick phase.
- B. Only during the component lay-down phase.
- C. During assembly/disassembly.
- D. During all phases of hoisting personnel.

Correct Answer: C

16. When using an assist crane during A/D operations, what must be verified about the loads imposed on the assist crane at each phase?

- A. That a separate lift plan has been filed with OSHA.
- B. That a licensed signalperson is directing the lift.
- C. That the loads are within the assist crane's rated capacity.
- D. That the loads are less than 50% of the assist crane's rated capacity.

Correct Answer: C

17. When blocking is used to support lattice booms or components, it must be placed appropriately to prevent dangerous movement and collapse, and also to protect what?

- A. The equipment's color coding.
- B. The structural integrity of the equipment.
- C. The boom hoist drum.
- D. The assist crane's counterweights.

Correct Answer: B

18. If there is insufficient information to accurately identify the load's center of gravity during A/D, what action must be taken?

- A. The operation must be halted until a professional surveyor is hired.
- B. The A/D director must make an educated guess and document it.
- C. Measures designed to prevent unintended dangerous movement resulting from an inaccurate identification must be used.
- D. The load must be attached at multiple points to compensate.

Correct Answer: C

19. Suspension ropes and pendants must not be allowed to catch on which part of the boom or jib during assembly/disassembly?

- A. The boom hoist pawl.
- B. The boom or jib connection pins or cotter pins.
- C. The structural chords of the boom.
- D. The load line rigging.

Correct Answer: B

20. When reliance is to be placed on the boom hoist brake to prevent boom movement during A/D, what must be done prior to such reliance?

- A. The brake must be lubricated.
- B. The boom hoist pawl must be engaged.
- C. The brake must be tested to determine if it is sufficient to prevent boom movement.
- D. The brake's temperature must be checked.

Correct Answer: C

21. Backward stability must be assured before swinging the upperworks, travel, and at which other time?

- A. During the initial site hazard assessment.
- B. During final inspections of the crane.
- C. When attaching or removing equipment components.
- D. When fueling the crane.

Correct Answer: C

22. Before a crew member goes to a location that is out of view of the operator and is potentially dangerous, what must the crew member do?

- A. Set up a temporary barrier.
- B. Inform the operator that he/she is going to that location.
- C. Put on a high-visibility vest.
- D. Signal the crew chief with a thumbs-up.

Correct Answer: B

23. If the operator knows a crew member is in a potentially dangerous position out of view, what must the operator do?

- A. Stop the engine and exit the cab.
- B. Sound the crane's horn three times.
- C. Not move any part of the equipment until informed the crew member is in a safe position.

D. Begin movement slowly and continuously monitor the mirrors.

Correct Answer: C

24. When rigging is used for assembly/disassembly, who must the employer ensure does the rigging work?

- A. Any crew member with two years of rigging experience.
- B. A qualified rigger (who meets the definition of a qualified person).
- C. A rigger certified by a recognized third-party organization.
- D. The most junior crew member to gain experience.

Correct Answer: B

25. Under what specific condition are employees allowed to be under the boom, jib, or other components when pins are being removed?

- A. If a professional engineer has signed off on the procedure.
- B. If the operator is not in the cab.
- C. Only if site constraints require one or more employees to be in such a position.
- D. If the boom has been properly choked with wire rope.

Correct Answer: C

26. Synthetic slings used during A/D must be protected from what to prevent a reduction of the sling's rated capacity?

- A. Exposure to excessive sunlight.
- B. Abrasive, sharp or acute edges, and configurations causing distortion or localized compression.
- C. Temperatures below freezing.
- D. Contact with the equipment's steel components.

Correct Answer: B

27. Outriggers or stabilizers, when used, must be either fully extended or deployed how?

- A. To a minimum of 50% extension.
- B. Only as specified in the load chart, if manufacturer procedures permit.
- C. As far as practical to maximize stability.
- D. To a minimum of 75% extension, regardless of manufacturer procedures.

Correct Answer: B

28. What must outriggers be set to remove from the wheels of a crane (except for locomotive cranes)?

- A. Grease and debris.

- B. Static electricity.
- C. The equipment weight.
- D. The axle pins.

Correct Answer: C

29. Who must each outrigger or stabilizer be visible to during extension and setting?

- A. The site superintendent.
- B. The A/D director and the rigger.
- C. The operator or to a signal person.
- D. Any qualified person on site.

Correct Answer: C

30. Where must outrigger and stabilizer blocking be placed?

- A. Under the entire outrigger beam.
- B. Under the outer bearing surface of the extended beam or the float/pad of the jack.
- C. Stacked directly on top of the wheels.
- D. Anywhere that provides a stable base.

Correct Answer: B

31. When dismantling booms and jibs, none of the pins in the pendants are to be removed (partly or completely) when the pendants are in what state?

- A. Fully extended.
- B. Under tension.
- C. Coated with a rust inhibitor.
- D. Unattached to the boom section.

Correct Answer: B

32. During dismantling, if the boom is being supported by the uppermost boom section resting on the ground, which pins must not be removed?

- A. All pins on boom sections between the uppermost boom section and the crane/derrick body.
- B. Only the bottom pins on the counterweight tray.
- C. Only the pins connecting the jib to the boom tip.
- D. The top pins on boom sections located beyond the pendant attachment points.

Correct Answer: A

33. The top pins on the cantilevered portion of the boom being removed must not be removed until what condition is met?

- A. A warning siren is activated.
- B. The section to be removed is fully supported.
- C. The section is lifted by two separate cranes.
- D. The weather is completely calm.

Correct Answer: B

34. If the line's voltage is less than 350,000 volts, what is the required minimum clearance distance from a power line?

- A. 10 feet
- B. 15 feet
- C. 20 feet
- D. 25 feet

Correct Answer: C

35. If a power line's voltage is over 350,000 volts, what is the required minimum clearance distance?

- A. 30 feet
- B. 40 feet
- C. 50 feet
- D. 60 feet

Correct Answer: C

36. An alternative to ensuring 20-foot clearance at maximum radius is establishing a work zone by setting boundaries using which tools?

- A. Guardrails or safety nets.
- B. Flags, a range limit device, or a range control warning device.
- C. Only temporary fencing.
- D. High-visibility paint and caution tape.

Correct Answer: B

37. According to Table A, what is the minimum clearance distance for a power line with a voltage over 50 kV up to and including 200 kV?

- A. 10 feet
- B. 15 feet
- C. 20 feet
- D. 25 feet

Correct Answer: B

38. According to Table A, what is the minimum clearance distance for a power line with a voltage over 350 kV up to and including 500 kV?

- A. 20 feet
- B. 25 feet
- C. 35 feet
- D. 45 feet

Correct Answer: B

39. If an employer asks the utility owner/operator about a line's voltage, how long does the utility have to respond?

- A. One hour
- B. One working day
- C. Two working days
- D. Five business days

Correct Answer: C

40. When must all power lines be assumed to be energized?

- A. When there is visible arcing.
- B. Unless the utility owner/operator confirms the line is deenergized and visibly grounded at the worksite.
- C. If the line is marked with a 'DANGER' sign.
- D. After a planning meeting with the A/D director.

Correct Answer: B

41. If tag lines are used to maintain the required minimum clearance distance from a power line, they must be what?

- A. Made of steel cable.
- B. High-visibility orange.
- C. Non-conductive.
- D. Secured to a counterweight.

Correct Answer: C

42. If the operator cannot see the elevated warning line, what must be used to signal the operator that the crane is passing the marked line?

- A. A safety monitor from the controlling entity.
- B. A dedicated spotter.
- C. A proximity alarm set at 10 feet.

D. A drone with a camera.

Correct Answer: B

43. A dedicated spotter must be a worker whose only duty is to observe the clearance and who is in continuous contact with whom?

A. The site safety officer.

B. The crane owner.

C. The crane operator.

D. The controlling entity.

Correct Answer: C

44. What is the required setting for a proximity alarm or a range control warning device used as an optional precaution?

A. Set to automatically shut down the crane's engine.

B. Set to give the operator sufficient warning to prevent encroachment.

C. Set to activate at half the minimum required clearance distance.

D. Set to only give an audible warning, not a visual one.

Correct Answer: B

45. To assist in identifying the minimum clearance distance, what must a dedicated spotter be equipped with?

A. A pair of binoculars.

B. A visual aid (like a clearly visible line on the ground or stanchions).

C. A two-way radio only.

D. A detailed survey map.

Correct Answer: B

46. Operation below a power line is prohibited unless one of two conditions is met. What is the condition that does not involve deenergizing and grounding?

A. The operator has completed advanced power line safety training.

B. The highest point of the equipment's boom, even if fully extended and vertical, will be more than the required minimum distance from the power line.

C. A non-conductive barrier has been erected below the line.

D. The work can be completed in less than 30 minutes.

Correct Answer: B

47. In the event a crane contacts a power line, where is the crane operator and any other person on the crane generally safe?

- A. On the ground near the crane.
- B. As long as they remain on the crane.
- C. Only after the power line has been deenergized.
- D. As long as they do not touch the controls.

Correct Answer: B

48. In the event of power line contact, the greatest danger of electrocution is faced by a person who does what?

- A. Touches the equipment with non-insulated gloves.
- B. Simultaneously touches both the crane and the ground.
- C. Is more than 50 feet away from the crane.
- D. Is standing on a wet surface without touching the crane.

Correct Answer: B

49. Under what circumstance is a crane explicitly prohibited from being assembled or disassembled near a power line?

- A. During a light rain shower.
- B. By an employer without a full-time safety manager.
- C. Beneath an energized power line.
- D. When the wind speed exceeds 15 mph.

Correct Answer: C

50. During assembly/disassembly work, fall protection is generally required when a worker is more than what height above an unprotected side or edge?

- A. 6 feet
- B. 10 feet
- C. 15 feet
- D. 25 feet

Correct Answer: C

51. A crane traveling with a load must comply with the minimum clearance distance and associated precautions listed for which other type of operation?

- A. Personnel lifting operations.
- B. Power-line repair operations.
- C. Crane operating/hoisting operations.
- D. Overhead power line transmission.

Correct Answer: C

52. According to Table T, what is the minimum clearance distance when a crane is traveling with no load near a power line up to 0.75 kV?

- A. 4 feet
- B. 6 feet
- C. 10 feet
- D. 16 feet

Correct Answer: A

53. According to Table T, what is the minimum clearance distance when a crane is traveling with no load near a power line over 50 kV up to and including 345 kV?

- A. 6 feet
- B. 10 feet
- C. 16 feet
- D. 20 feet

Correct Answer: B

54. What must the A/D director take into account regarding wind speed and weather?

- A. The duration of the weather event.
- B. The effect of wind speed and weather on the equipment.
- C. The humidity and air pressure.
- D. The number of crew members required to withstand the wind.

Correct Answer: B

55. What precaution must be taken to prevent unintended movement from counterweights during A/D operations?

- A. The counterweights must be painted with a high-visibility color.
- B. Steps must be taken to prevent unintended movement from counterweights that are inadequately supported or are being hoisted.
- C. All counterweights must be removed before assembly begins.
- D. A separate spotter must be assigned to monitor counterweights.

Correct Answer: B

56. What is the first step you must take when planning to operate a crane on a site where a power line is present?

- A. Erect a non-conductive barrier around the line.
- B. Identify the crane's work zone to determine how close it could come to the power line.

- C. Request the utility owner/operator to deenergize the line.
- D. Confirm the line's voltage via Table A.

Correct Answer: B

57. What must the A/D director ensure about blocking material regarding size, amount, and condition?

- A. It is made from non-toxic materials.
- B. It is the correct size, amount, and condition.
- C. It is stamped with a load rating certification.
- D. It is only used for outriggers.

Correct Answer: B

58. Before an A/D operation begins, what is one thing the A/D director must ensure the crew understands?

- A. The latest stock market closing prices.
- B. The nearest emergency medical facility.
- C. The hazards associated with their tasks.
- D. The final inspection date for the equipment.

Correct Answer: C

59. When relying on the boom hoist brake, if it is insufficient to prevent boom movement, what must be used as a back-up?

- A. A boom hoist pawl, other locking device/back-up braking device, or another method of preventing dangerous movement.
- B. Only an assist crane for support.
- C. A dedicated crew member to manually hold the boom.
- D. A temporary weld on the boom support structure.

Correct Answer: A

60. When outrigger floats are used, what must be done with them?

- A. They must be painted high-visibility orange.
- B. They must be attached to the outriggers.
- C. They must be kept on a separate service truck.
- D. They must be inspected weekly by a qualified person.

Correct Answer: B

61. What must be done to prevent the boom/mast from moving when a crane is traveling with no load near a power line?

- A. The boom must be locked in a vertical position.
- B. The operator must account for the effects of speed and terrain on the equipment's movement.
- C. The crane must travel at a maximum speed of 5 mph.
- D. A dedicated spotter must monitor the boom at all times.

Correct Answer: B
