

# Mobile Crane Operator

1. When the weight of a load cannot be determined in other ways, it can be lifted slightly while monitoring the weight using instruments in the crane. The lift can proceed if the load is less than \_\_\_\_\_.
  - (A) 100 percent of the crane's capacity at the longest required operating radius
  - (B) 85 percent of the crane's capacity at the longest required operating radius
  - (C) 40 percent of the crane's capacity at the longest required operating radius
  - (D) 75 percent of the crane's capacity at the longest required operating radius
2. If a telescopic boom crane has a main boom length of 120 ft, a radius of 20 ft, a 50 Ton hook block, and rigging weight of 1,200 lbs, how would you calculate the net lifting capacity? Assume the crane's load chart indicates a gross capacity of 25,000 lbs at this configuration. What would be the net capacity?
  - (A) 22,800 lbs
  - (B) 23,800 lbs
  - (C) 25,000 lbs
  - (D) 24,000 lbs
3. What is the expected movement of a crane's load when the boom is lowered?
  - (A) The load moves away from the crane and downward
  - (B) The load remains at the same level and moves towards the crane
  - (C) The load moves towards the crane and upward
  - (D) The load remains at the same level and moves away from the crane
4. Which mobile crane boom configuration is most likely to increase the risk of side loading during operation?
  - (A) Long boom with minimum radius
  - (B) Short boom with maximum radius
  - (C) Medium boom with standard radius
  - (D) Fixed boom at a steep angle
5. If a lattice boom truck crane is operating at a boom angle of 45 degrees, how might this affect its load capacity compared to a boom angle of 30 degrees?
  - (A) The load capacity will remain the same regardless of the boom angle.
  - (B) The load capacity will be increased at a 45-degree angle compared to a 30-degree angle.
  - (C) The load capacity will be reduced at a 45-degree angle compared to a 30-degree angle.
  - (D) The load capacity is only affected by the weight of the load, not the boom angle.



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10. Describe the significance of a luffing jib in relation to crane maneuverability.
- A A luffing jib allows for independent movement, enhancing maneuverability in tight spaces.
- B A luffing jib is primarily used for stability rather than maneuverability.
- C A luffing jib restricts movement, making cranes less versatile.
- D A luffing jib functions similarly to a fixed jib.
11. What percentage does choking a synthetic sling reduce its capacity by?
- A 50%
- B 25%
- C 20%
- D 30%
12. If a telescopic boom crane has a gross lifting capacity of 100,000 lbs at a 20 ft radius with a 50 Ton Hook Block, what would be the new net capacity if the radius is increased to 30 ft and the rigging weight is 1,000 lbs? Assume the same boom length and configuration.
- A 98,000 lbs
- B 92,000 lbs
- C 90,000 lbs
- D 95,000 lbs
13. If a crane with a 55ft boom mode-B is lifting a load at a 30 degree angle, how would you expect the gross capacity to change compared to lifting at a 0 degree angle?
- A The gross capacity would double.
- B The gross capacity would remain the same.
- C The gross capacity would increase due to better leverage.
- D The gross capacity would decrease due to the angle reducing leverage.
14. If a crane is lifting a load at a 10-degree angle instead of vertically, how would this affect the working load limit and what precautions should be taken?
- A The working load limit decreases; use a load chart to determine the new limit.
- B The working load limit remains the same; no precautions are needed.
- C The working load limit is irrelevant; focus solely on the load's weight.
- D The working load limit increases; additional safety devices are required.

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15. Explain how the radius and boom length interact to determine the lifting capacity of a telescopic boom crane. What role does each parameter play?
- (A) Radius increases capacity, boom length has no effect      (B) Both radius and boom length decrease capacity
- (C) Radius decreases capacity, boom length increases it      (D) Boom length increases capacity, radius can decrease it
16. If a crane operator adjusts the jib to an offset of 15 degrees while maintaining the same boom angle, what safety considerations should the operator keep in mind regarding load capacity?
- (A) The operator should ensure that the load capacity is not exceeded due to the increased load radius.      (B) The operator can increase the load capacity since the boom angle is unchanged.
- (C) The operator should only focus on the stability quadrant without considering load capacity.      (D) The operator should disregard load capacity as the jib offset does not affect it.
17. Describe the importance of the holding valve in ensuring safety during crane operations.
- (A) The holding valve allows for faster operation of the jack during lifting tasks.      (B) The holding valve is used to control the angle of the outrigger during operation.
- (C) The holding valve is crucial for maintaining pressure in the vertical ram, preventing sudden retraction if a hydraulic failure occurs.      (D) The holding valve prevents overload conditions in the crane's lifting mechanism.
18. When operating two mobile cranes to lift a load, why is it crucial to maintain the alignment of the hoist lines?
- (A) To ensure that the load is evenly distributed between the cranes      (B) To allow for faster lifting speeds
- (C) To prevent the load from swinging during the lift      (D) To minimize the risk of structural failure in the cranes
19. Explain how lowering the boom of a crane affects the position of the load being lifted.
- (A) The load will remain stationary regardless of the boom's movement      (B) The load will always rise regardless of the boom's position
- (C) Lowering the boom causes the load to descend and can also change its horizontal position      (D) The load will only move horizontally and not vertically when the boom is lowered