

## BOOM TRUCK OPERATOR SAFETY TRAINING WRITTEN EXAMINATION

NAME: \_\_\_\_\_

DATE: \_\_\_\_\_

1. The size of the pad supporting the outrigger is primarily dependent upon:
  - a. Whatever material is available at the job site to use as a pad.
  - b. The type of soil.
  - c. The space available for the outrigger.
  - d. The opinion of the job site supervisor.
  
2. In setting up the crane at the job site, the operator needs to consider:
  - a. What pipes, voids and tanks are buried in the setup location.
  - b. Where the quickest place for set up is.
  - c. Where the boom truck can be operated without outriggers extended.
  - d. All the above are correct.
  
3. The soil around the foundation of a building can always be considered stable enough to set up the crane.
  - a. True
  - b. False
  
4. The minimum distance between the crane boom and a 50,000 volt power line is:
  - a. 5 feet
  - b. 10 feet
  - c. 15 feet
  - d. 20 feet
  
5. The crane operator is responsible for knowing the weight of the load before making a lift.
  - a. True
  - b. False
  
6. The most common cause of damage to wire rope on the crane is:
  - a. Corrosion
  - b. Broken wires
  - c. Over loading
  - d. Crushing due to crossed wraps on the winch drum.
  
7. Hook safety latches are not required on the load hook.
  - a. True
  - b. False

8. The operator must always make sure the boom truck is reeved with sufficient parts of hoist wire for any given load.
- True
  - False
9. When setting up the boom truck, how many outriggers need to be extended?
- Only those on the side of the boom truck where the lift is being made.
  - If lifting a light load, none are required.
  - All outriggers must be extended before making any lift.
  - The rear outriggers are not required for most lifts.
10. Who is authorized to be under a load at any given time?
- No one is allowed under the load.
  - Only the riggers handling the load.
  - Only job site personnel.
  - Only those with hard hats.
11. Who can give the crane operator an emergency stop signal?
- The designated signal person.
  - The site supervisor.
  - The site safety manager.
  - Anyone on site.
12. If the bubble levels on the boom truck are broken, how can the level of the truck be determined? (Circle all the correct answers)
- Use a carpenter's level on the frame of the crane turret.
  - Use the load line as a plumb bob.
  - Stand back and site on the crane as best as you can.
  - Leveling really isn't that important.
13. Stopping the load suddenly can:
- Cause structural damage to the crane.
  - Tip the crane over.
  - Help keep the wire rope spooled on the drum properly.
  - Answers a. and b. are correct.
14. How many signal persons should be designated to give hand signals to the operator:
- One primary and one backup
  - Only one
  - All those who are handling the load can give hand signals.
  - Doesn't matter.

15. If the boom of the crane comes into contact with a live power line, what should those on the ground do:
- Carefully walk up to the crane and help the operator off of the truck.
  - Hook onto the crane and pull it out from the power lines.
  - Keep all people away from the area surrounding the boom truck.
  - Throw a rope to the operator so he can be drug away from the truck.
16. The operator may leave the crane with a load suspended in the air.
- True
  - False
17. When can the boom truck be used to pick and carry a load:
- Only when the ground is level and firm.
  - Only when the crane is driven at 1 mph.
  - Only when the load is secured with a tag line.
  - The crane is not rated for pick and carry operations.
18. When moving the boom truck around the job site it is not necessary to lower the boom.
- True
  - False
19. What is the number one cause of deaths involving cranes?
- Boom failure due to overloading.
  - Tipping the crane over
  - Electrocution
  - Being hit by a moving load.
20. When using the boom angle indicator to set the radius before making a lift, the angle as read with the boom angle indicator should be a few degrees:
- Greater than that shown on the load capacity chart
  - The same as shown on the load capacity chart
  - Less than that shown on the load capacity chart
21. The crane will always begin to tip before any structural damage can occur due to an overload.
- True
  - False
22. The appropriate load rating chart for the crane shall be:
- attached to the boom
  - in the office
  - in the vicinity of the crane
  - visible to the operator

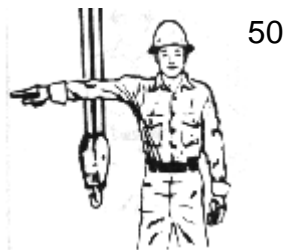
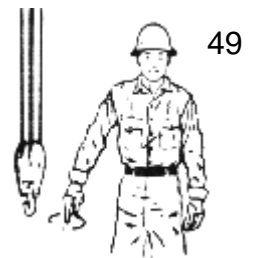
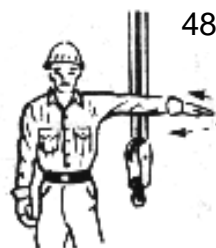
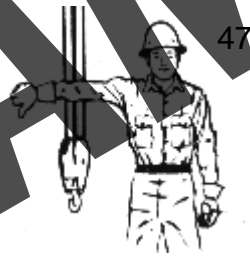
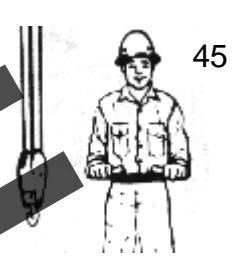
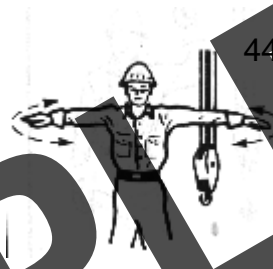
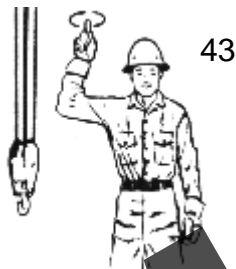
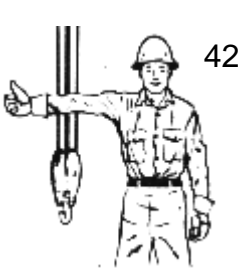
23. The weight of the hook, hook block, and slings:
- is included in the load chart ratings
  - has no effect on the crane capacity
  - is impossible to determine
  - shall be considered part of the load.
24. If a suitable sling is not available for use, the hoist rope may be wrapped around the load.
- True
  - False
25. If the crane boom will not reach the desired landing spot, the load may be pulled with a tag line while being lowered.
- True
  - False
26. The load shall not be lowered to where less than \_\_\_\_\_ full wraps remain on a smooth faced hoist drum.
- 6
  - 2
  - 3
  - 4
27. The boom angle indicator or radius indicator
- is recommended but not required
  - must be inspected each day the crane is used
  - must be visible to the operator
  - both b. and c.
28. The anti-two-blocking device will prevent
- overloading the crane
  - shock loading the boom
  - pulling the hook block into the boom head
  - side loading the crane
29. The load chart and hand signals need not be posted on the job site if they are on file in the field office.
- True
  - False

30. When visually inspecting the wire rope, the operator should look for
- broken wires
  - birdcaging
  - kinking and crushing
  - all of the above.
31. If a wire rope has been kinked, crushed, or birdcaged,
- the rope should be seized at the damaged area before use
  - the rope should be replaced
  - it should be repaired by light hammering
  - the damaged portion should be removed and the rope spliced.
32. Each day, before a crane is operated, the \_\_\_\_\_ shall inspect the crane.
- crane operator
  - rigger
  - roustabout
  - designated person in charge
33. The \_\_\_\_\_ is responsible for the safe operation of the crane.
- safety engineer
  - designated person in charge
  - crane operator
  - production foreman
34. The crane can be shock loaded by \_\_\_\_\_.
- sudden starts and stops
  - setting a load down hard
  - abrupt changes in hook speed
  - all of the above
35. Before engaging the power take-off on the boom truck, the operator should verify that all controls are in the "off" or "neutral" position.
- True
  - False
36. As the angle of the boom from horizontal increases, the structural capacity of the crane \_\_\_\_\_.
- increases
  - remains the same
  - decreases

37. As the load radius increases, the structural capacity of the crane \_\_\_\_\_.
- remains the same
  - increases
  - decreases
38. When the angle of the boom toward the horizontal is decreasing, the load radius is \_\_\_\_\_.
- remaining constant
  - increasing
  - decreasing
39. The operator must test the hydraulics before handling a near capacity load.
- True
  - False
40. Pendulum action of the load (swing-out) due to excessive swing speeds has no negative effect on a properly setup crane.
- True
  - False
41. Operating the crane in high winds \_\_\_\_\_.
- increases the stress on the boom
  - cushions the effects of shock loading
  - is allowed for lattice booms only
  - is allowed for box booms only.

Match up the hand signal description with the proper diagram.

- a. Raise the load
- b. Lower the load
- c. Raise the boom
- d. Lower the boom
- e. Swing the boom
- f. Extend the boom
- g. Retract the boom
- h. Stop
- i. Emergency Stop



## LOAD CHART EXERCISE

1. What is the total load on the tip of the boom?

\_\_\_\_\_

2. What is the minimum height of the boom?

\_\_\_\_\_

3. What is the minimum radius possible to place the load where designated.

\_\_\_\_\_

4. What is the safest boom length to use for this lift?

\_\_\_\_\_

5. My set up for this lift is:

Radius: \_\_\_\_\_

Boom Length: \_\_\_\_\_

Maximum lift capacity for this set-up: \_\_\_\_\_

Approximate separation from the building edge to the boom: \_\_\_\_\_

**SAMPLE**