

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

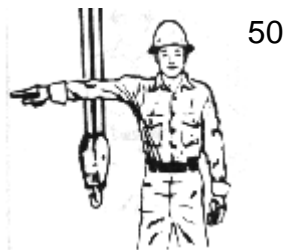
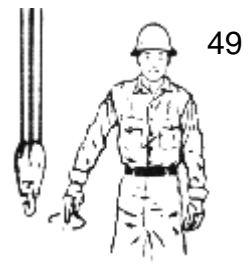
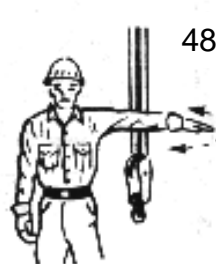
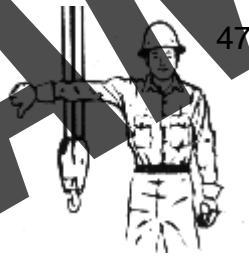
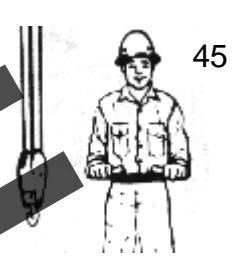
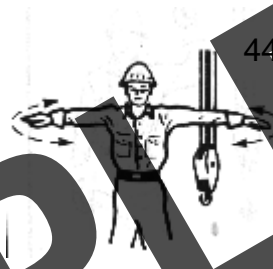
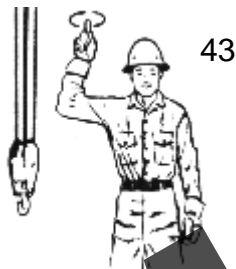
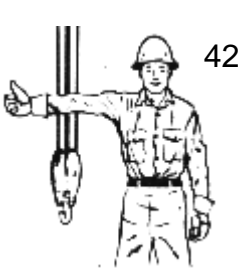
23. The weight of the hook, hook block, and slings:
- is included in the load chart ratings
 - has no effect on the crane capacity
 - is impossible to determine
 - shall be considered part of the load.
24. If a suitable sling is not available for use, the hoist rope may be wrapped around the load.
- 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