ROUGH TERRAIN CRANE 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 crane can be operated with the fewest 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 common cause of damage to wire rope on the crane is:

   a. Corrosion
   b. Crushing due to crossed wraps on the winch drum
   c. Over loading
   d. All of the above

7. Hook safety latches are not required on the load hook.

   a. True
   b. False

8. The operator must always make sure the crane is reeved with sufficient parts of hoist wire for any given load.

   a. True
   b. False

9. When setting up the crane, how many outriggers need to be extended?

   a. Only those on the side of the crane where the lift is being made.
   b. It is left to the judgment of the operator.
   c. All outriggers must be extended before making any lift.
   d. The rear outriggers are not required for most lifts.

10. Who is authorized to be under a load at any given time?

   a. No one is allowed under the load.
   b. Only the riggers handing the load.
   c. Only job site personnel.
   d. Only those with hard hats.

11. Who can give the crane operator an emergency stop signal?

   a. The designated signal person.
   b. The site supervisor.
   c. The site safety manager.
   d. Anyone on site.

12. If the bubble level on the crane is broken, how can the level of the crane be determined? (Circle all the correct answers)

   a. Use a carpenter's level on the frame of the crane turret.
   b. Use the load line as a plumb bob.
   c. Stand back and site on the crane as best as you can.
   d. Leveling really isn't that important.

13. Stopping the load suddenly can:

   a. Cause structural damage to the crane.
   b. Tip the crane over.
   c. Help keep the wire rope spooled on the drum properly.
   d. Answers a. and b. are correct.

14. How many signal persons should be designated to give hand signals to the operator:

   a. One primary and one backup
   b. Only one
   c. All those who are handling the load can give hand signals.
   d. 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:

a. Carefully walk up to the crane and help the operator off of the crane.
b. Hook onto the crane and pull it out from the power lines.
c. Keep all people away from the area surrounding the crane.
d. Throw a rope to the operator so he can be drug away from the crane.

16. The operator may leave the crane with a load suspended in the air.

a. True
b. False

17. When can the crane be used to pick and carry a load:

a. Only when the ground is level and firm.
b. Only when the crane is driven at creep speed.
c. Only when the load is secured with a tag line.
d. All of the above.

18. When moving the crane around the job site the boom should be lowered and retracted.

a. True
b. False

19. What is the number one cause of deaths involving cranes?

a. Boom failure due to overloading.
b. Tipping the crane over
c. Electrocution
d. 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:

a. Greater than that shown on the load capacity chart
b. The same as shown on the load capacity chart
c. 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.

a. True
b. False

22. The appropriate load rating chart for the crane shall be:

a. is not required
b. in the office
c. some where on the job site
d. in the cab of the crane

23. The weight of the hook, hook block, and slings:

a. is included in the load chart ratings
b. has no effect on the crane capacity
c. is impossible to determine
d. 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.

a. True
b. 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.

a. True
b. False

26. The load shall not be lowered to where less than _____ full wraps remain on a smooth faced hoist drum.

a. 6
b. 2
c. 3
d. 4

27. The boom angle indicator or radius indicator

a. is recommended but not required
b. must be inspected each day the crane is used
c. must be visible to the operator
d. both b. and c.

28. The anti-two-blocking device will prevent

a. overloading the crane
b. shock loading the boom
c. pulling the hook block into the boom head
d. 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.

a. True
b. False

30. When visually inspecting the wire rope, the operator should look for

a. broken wires
b. birdcaging
c. kinking and crushing
d. all of the above.

31. If a wire rope has been kinked, crushed, or birdcaged,

a. the rope should be seized at the damaged area before use
b. the rope should be replaced
c. it should be repaired by light hammering
d. the damaged portion should be removed and the rope spliced.

32. Each day, before a crane is operated, the _____ shall inspect the crane.

a. crane operator
b. rigger
c. roustabout
d. designated person in charge

33. The_____ is responsible for the safe operation of the crane.

a. safety engineer
b. designated person in charge
c. crane operator
d. production foreman

34. The crane can be shock loaded by _____.

a. sudden starts and stops
b. setting a load down hard
c. abrupt changes in hook speed
d. all of the above

35. Before starting the crane, the operator should verify that all controls are in the “off” or “neutral “ position.

a. True
b. False

36. As the angle of the boom from the horizon increases, the structural capacity of the crane _____.

a. increases
b. remains the same
c. decreases

37. As the load radius increases, the structural capacity of the crane _____.

a. remains the same
b. increases
c. decreases

38. When the angle of the boom toward the horizon is decreasing, the load radius is _____.

a. remaining constant
b. increasing
c. decreasing

39. The operator must test the hydraulics before handling a near capacity load.

a. True
b. False

40. Pendulum action of the load (swing-out) due to excessive swing speeds has no negative effect on a properly setup crane.

a. True
b. False

41. Operating the crane in high winds _____.

a. can increase the stress on the boom
b. can cause the load to get out of control
c. can affect the stability of the crane
d. all of the above.

Match up the hand signal description with the proper diagram.

42. Raise the load
43. Raise the boom
44. Swing the boom
45. Retract the boom
46. Emergency Stop
47. Lower the load
48. Lower the boom
49. Extend the boom
50. Stop

A_____

B_____

C_____

D _____

E _____

F_____

G_____

H_____

I_____

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: _____