

**Name (print):** \_\_\_\_\_ **Date:** \_\_\_\_\_ **Score:** \_\_\_\_\_

**Signature:** \_\_\_\_\_

Each question is worth 1 point unless otherwise noted. A passing score is 64 out of a possible 80.  
Return the completed quiz to **Karen Kiselycznyk** ([safety\\_training@lle.rochester.edu](mailto:safety_training@lle.rochester.edu), Rm. 2212).

- 1) If an activity seems unsafe
  - a) Address the concern after the job is done
  - b) The system must be safe since it is at LLE
  - c) I just haven't been trained yet
  - d) Stop work and address the concern
- 2) Only perform activities for which you are qualified
  - a) True
  - b) False
- 3) Qualification for the use of overhead cranes requires training for capacities starting at;
  - a) 0 lbs
  - b) 120 lbs
  - c) 500 lbs
  - d) 20000 lbs
- 4) Basic rigging training is required starting at a payload weight of
  - a) 0 lbs
  - b) 120 lbs
  - c) 500 lbs
  - d) 20000 lbs
- 5) Advanced rigging training is required starting at a payload weight of
  - a) 0 lbs
  - b) 120 lbs
  - c) 500 lbs
  - d) 20000 lbs
- 6) The type of overhead cranes used at LLE are
  - a) Wall crane
  - b) Jib crane
  - c) Gantry crane
  - d) Overhead bridge crane
  - e) All of the above
- 7) The type of Overhead bridge crane used in OMEGA Target Bay is
  - a) Overhead Underhung Bridge Crane
  - b) Overhead top running Bridge Crane
- 8) The type of Overhead bridge crane used in OMEGA EP are
  - a) Overhead Underhung Bridge Crane
  - b) Overhead top running Bridge Crane

- M\_009 Overhead Crane Safety Lecture Test S-SA-M-017 Rev B  
For use with M\_009 Overhead Crane Safety Lecture S-SA-M-009 Rev B

- 19) The hoist holding brake is
- a) A manually set brake.
  - b) A spring set electrically released mechanism.
  - c) A load control brake.
  - d) An eddy current brake.
- 20) The power supply to the runway conductors shall be controlled by a switch located on a fixed structure, accessible from the floor, and arranged to be locked in the open/off position.
- a) True
  - b) False
- 21) The electrical disconnects for all LLE bridge cranes are clearly labeled on the cover.
- a) True
  - b) False
- 22) A power supply disconnect used to remove power to an overhead crane runway shall be.
- a) Accessible from the crane cab.
  - b) Accessible from the floor.
  - c) Accessible from the pendant.
  - d) Located on the crane walkway.
- 23) Crane electrical equipment and controls are located directly on the bridge.
- a) True
  - b) False
- 24) All controller push buttons must.
- a) Have rubber boots to prevent electrical contact.
  - b) Return to the off position when released by the operator.
  - c) Be specifically marked "North," "East," "South," and "West."
  - d) Be kept above head height when not in use to prevent head injuries.
- 25) A strain relief performs what function.
- a) Holds the festoon in position.
  - b) Keeps the bridge conductors in place.
  - c) Removes pendant weight from the conductors.
  - d) Removes pendant weight from the operator.
- 26) Electrical shoe type collectors in the power feed system.
- a) Send power to the runway buss.
  - b) Collect power from the runway buss.
  - c) Collect excess power and dissipate that power through resistors.
  - d) Is a better alternative to a festoon system.
- 27) The primary purpose of a hoist limit switch is to
- a) Prevent overtravel of the powered bridge.
  - b) Limit hook travel.
  - c) Ensure the holding brakes are functioning.
  - d) Replace the geared limit switch.

- 28) Which statement about load hooks is the most correct?
- a) Always make sure the hook supports the load
  - b) The latch must never support the load
  - c) Latches are intended to retain loose sling or devices under slack conditions
  - d) Latches are not intended to be an anti-fouling device
  - e) All of the above
- 29) Wire rope defects consist of
- a) Wire breaks
  - b) Reduction in diameter from deterioration
  - c) External wear
  - d) Decreased elasticity
  - e) Internal corrosion
  - f) External Corrosion
  - g) Deformation
  - h) All of the above
- 30) Wire rope defects reduce the load rating of the wire rope.
- a) True
  - b) False
- 31) In an overhead hoist running rope, how many valley breaks are permitted?
- a) 0
  - b) 3
  - c) 4
  - d) 6
  - e) 12
  - f) No limit
- 32) At LLE, any rope that does not appear to be in a new condition must be tagged out for inspection by an external Certified Crane Inspector?
- a) True
  - b) False
- 33) At LLE, Frequent Inspection of the cranes occurs
- a) Daily
  - b) Weekly
  - c) Monthly
  - d) Quarterly
  - e) Yearly
  - f) When the crane breaks down
- 34) At LLE, Periodic Inspection of the cranes occurs
- a) Daily
  - b) Weekly
  - c) Monthly
  - d) Quarterly
  - e) Yearly
  - f) When the crane breaks down
- 35) At LLE, periodic and frequent crane inspections by
- a) Qualified LLE personnel
  - b) Operators
  - c) Certified Crane Inspectors
  - d) Anyone who has time
- 36) Records for overhead crane inspections are kept and maintained by the O&M group and are available for review by crane operators.
- a) True
  - b) False
- 37) At LLE Operational Tests are performed by
- a) Qualified LLE personnel
  - b) Operators
  - c) Certified Crane Inspectors
  - d) Anyone who has time

- 38) At LLE maintenance is performed by
- a) Qualified LLE personnel
  - b) Operators
  - c) Certified Crane vendors
  - d) The Operations and Maintenance group
- 39) LLE personnel are qualified and permitted to perform preventive maintenance on overhead cranes.
- a) True
  - b) False
- 40) At the start of each shift, visual crane inspections must be performed by
- a) Qualified LLE personnel
  - b) Operators
  - c) Certified Crane Inspectors
  - d) Anyone who has time
- 41) No overhead crane is entirely safe unless it is
- a) Used on a regular basis.
  - b) Tested to 150% of rated load.
  - c) Properly maintained.
  - d) Operated by a qualified inspector.
- 42) Cranes shall be operated only by the following qualified personnel:
- a) designated persons
  - b) trainees under the direct supervision of a designated person
  - c) maintenance and test personnel, when it is necessary in the performance of their duties
  - d) inspectors (crane)
  - e) any of the above
- 43) Prior to operating an overhead crane or hoist, the operator should
- a) Make sure people are at least 3-feet from the hoisting action.
  - b) Read the crane operators manual.
  - c) Read the load chart and check all operating radii.
  - d) Test the crane's dynamic braking.
- 44) When is the crane operator required to test the crane controls?
- a) On an hourly basis.
  - b) Weekly.
  - c) Daily.
  - d) At the start of the shift.
- 45) Do not
- a) Perform a daily inspection at the start of a shift. Only at the end of the shift.
  - b) Check to see that the crane has been inspected within the last year.
  - c) Lift two or more separately rigged loads.
  - d) Check load weight against crane capacity, overhead cranes have tremendous strength.
- 46) The first test of an upper limit switch should be conducted at
- a) Fastest hoist speed.
  - b) Slow speed.
  - c) 50% of rated speed.
  - d) 75% of rated speed.

- 47) Prior to starting a shift the crane operator should
- Review previously documented crane issues.
  - Operate the crane with at least 25% rated load.
  - Run down the batteries in the remote control.
  - Test the path of the load.
- 48) If the pendant station has a stop button you should
- Check the stop button during a pre-operational inspection.
  - Never use the stop button unless there is an emergency.
  - Press the stop while the hoist is traveling.
  - Use it after every lift.
- 49) Before moving any load the weight of the load should be
- Checked to ensure the lift is within capacity of the crane.
  - No greater than 110% of the crane's capacity.
  - Rigged with a chain sling to avoid slipping.
  - Checked by lifting it a few inches to see that the crane can handle the weight.
- 50) An important aspect of maintaining safety of crane and rigging operations is
- Keeping all body parts 10-feet from the load.
  - Knowing the weight of the load.
  - Never using chain slings.
  - Never using slings for more than 50% of their rated capacity.
- 51) "Rated Load" is defined as
- The maximum load for which a crane or hoist is designed.
  - The maximum load which you intend to lift during a shift.
  - Maximum load capacity plus 25%.
  - The load weight applied on the hook(s).
- 52) The hoist or crane user should conduct an inspection
- Place a load of at least 50% of the hoist capacity on the hook.
  - Ensure a load equal to 10% of stated line pull is on the hook.
  - Ensure the hoist will be capable of running into the switch at 115% of rated speed.
  - The operator should operate the hoist or crane in each of the crane functions.
- 53) The proper way to test the hoist brakes is
- In the hoisting direction.
  - In the lowering direction.
  - Within 35% of the rated load speed.
  - Within two inches after power is interrupted.
- 54) When working in tight areas it is a good idea to
- Move the load through the area quickly to avoid contact with people or obstructions.
  - Perform a load test of the crane first.
  - Make a dry run to determine the safest way to operate under existing conditions.
  - Refuse to make the lift.

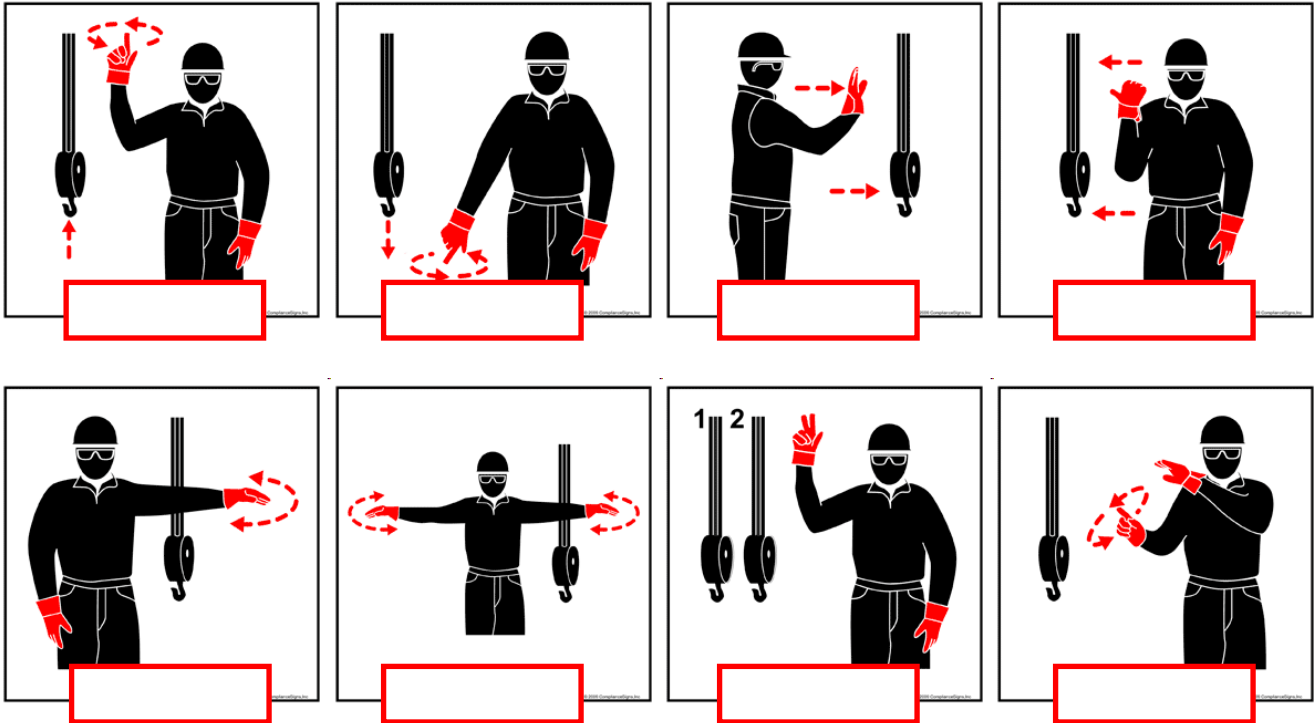
- 55) Before starting to move a load, an operator should
- Anticipate that workers will get out of the way.
  - Know the intended travel path.
  - Know where to park the crane.
  - Turn on the flashing light.
- 56) When positioning a crane for a true vertical lift
- Be ready to move the load quickly when the load swings.
  - Get the load hook within 12-inches of the load center.
  - Hoist and travel quickly to catch the drift.
  - Make sure the hook is above the load's center of gravity.
- 57) Before starting a lift, hoist lines must be.
- Of 6x25 wire rope construction.
  - Within plus or minus 15-degrees for fleet angle.
  - Vertical.
  - Not twisted more than three times around themselves.
- 58) When moving a load into an area where your visibility is limited you should
- Hoist the load over everyone to get out of their way.
  - Identify a signal person to help spot the load.
  - Only do so with radio communication.
  - Tell everyone to watch out.
- 59) When moving a load you should
- Keep the load as high as possible.
  - Never hoist loads over personnel.
  - Only stop the load over other workers when necessary.
  - Travel at full speed.
- 60) When landing a load, you must be certain
- The crane bridge is locked into position.
  - The crane can handle the load.
  - The floor can support the weight.
  - The trolley is not against the end stops.
- 61) When parking a crane you should
- Expect that forklift traffic will see and avoid the crane block.
  - Leave the crane in the aisle so it is ready for your next lift.
  - Leave the load block down low so everyone can see it.
  - Park the crane where it causes the least interference.
- 62) Unusual noises and/or vibrations should be.
- Caused by normal travel of the crane.
  - Ignored until the end of your shift.
  - Immediately reported to supervision.
  - Recorded on the daily inspection log.

- 63) When are personnel allowed to ride on a below the hook lifting device
- a) Always.
  - b) Never.
  - c) When instructed to do so by supervision.
  - d) When their job requires them to do so.
- 64) Only approved and rated rigging gear shall be attached to a load hook by a qualified rigger.
- a) True
  - b) False
- 65) Side pulls are permitted at LLE only when coordinated through ME.
- a) True
  - b) False
- 66) The operator shall not leave his position at the controls
- a) Until his shift has ended.
  - b) While a load is suspended.
  - c) Until the brakes have been checked and the load is secure in its elevated position.
  - d) Until power has been locked out.
- 67) A load shall not be lowered below the point where less than \_\_\_\_ wraps of rope remain on each anchorage of the hoisting drum. (Fill in the blank)
- a) 0
  - b) 1
  - c) 2
  - d) 3
- 68) Select the most complete statement below that completes the following statement: "Crane motion includes"
- a) Holding the load.
  - b) Initiating movement and stopping movement.
  - c) Initiating movement and controlling movement
  - d) Initiating movement, controlling movement, and stopping movement.
- 69) If the crane operator has any questions or concerns about operating safety or rigging, he/she should
- a) Check with supervision for a resolution.
  - b) Make their best estimate of safety and get the job completed.
  - c) Work extra cautiously.
  - d) Quit the job and go on to other work.
- 70) If a crane operator must turn his/her attention away from a lifted load
- a) Stop the machine first.
  - b) Get someone else to watch the load.
  - c) It is okay so long as there are no obstructions in the way.
  - d) The crane speed should be reduced to slow.



71) Identify the eight hand signals by filling in the boxes with the correct letter. (8 pts)

- |                      |                   |
|----------------------|-------------------|
| a) Hoist (raise)     | e) Bridge travel  |
| b) Move slowly       | f) Emergency stop |
| c) Lower             | g) Carrier travel |
| d) Multiple trolleys | h) Stop           |



72) If an overhead crane has a "Do Not Use" tag on the disconnect you should

- Consult a co-worker for his or her suggestion.
- Not use the crane.
- Use the crane for your shift and place the tag back on the crane.
- Use the crane sparingly.

73) Any overhead crane found to have a deficiency shall be de-energized and tagged out in accordance with LLE lockout/tagout procedures.

- True
- False