

# Crane/Lifting Operations Supervisor

**A62**

Technical Test – Theory

**Note: The candidate may refer to copies of the guidance notes of PUWER 1998, LOLER 1998 and BS 7212 parts 1 to 3 during the theory test**

Legislative and regulative	1. Explain the difference between an employing and user organisation.
	<b>A</b>
	2. State why there must be a safe system of work.
	<b>A</b>
	3. Name TWO duties of the crane operator.
	<b>A</b>
	4. Name FOUR items that must be recorded when a thorough examination on a lifting appliance has been carried out.
	<b>A</b>
	5. What is the Factor of Safety when lifting personnel?
	<b>A</b>
	6. Who has overall control of the lifting operation?
	<b>A</b>
	7. When a crane company hires out a crane, name TWO main legal requirements the hire company must meet regarding the crane and driver.
	<b>A</b>
	8. To whom should the appointed person give all details involving the lifting operation?
	<b>A</b>
	9. Who is responsible for providing the contractor with written details of the work to be done?
	<b>A</b>

*continued...*

Legislative and regulative continued	10. Name TWO possible penalties for not following legal requirements when using a crane.
	<b>A</b>
	11. Which part of BS 7121 is specific to mobile cranes?
	<b>A</b>
	12. What is the definition of, or how can a hazard be described?
	<b>A</b>
	13. What is the purpose of a risk assessment?
	<b>A</b>
	14. List SIX typical subject areas that should be covered in a site induction.
	<b>A</b>
	15. What THREE main duties of The Health and Safety at Work Act must employees follow?
	<b>A</b>
	16. What does The Health and Safety at Work Act require employers to do with regards specifically to plant?
	<b>A</b>
	17. a) What is the purpose of a Method Statement and b) what is required of the operator?
	<b>A</b>
	18. Name FOUR different types or levels of sanctions that can be applied (by employers and judicial bodies) to plant operators who do not comply with, or follow legislation and regulations?
	<b>A</b>
	19. The operator has to use a new model of crane that they are unfamiliar with. What do Regulations (i.e. LOLER 98) and other guidance require the operator to have?
<b>A</b>	

*continued...*

Legislative and regulative continued	20. What are the possible outcomes if being prosecuted for not complying with legislation and regulations?
	<b>A</b>
	21. What do The Work at Height Regulations require of crane supervisors?
	<b>A</b>
	22. How can a qualification or card benefit a crane supervisor?
	<b>A</b>
Lifting equipment (cranes)	23. What is the difference between a contract lift and a 'standard' crane hire?
	<b>A</b>
	24. What effect does boom and chassis deflection have on the radius of a crane?
	<b>A</b>
	25. What is the minimum recommended distance that is allowed between the counterweight(s) of the crane and another object/structure?
	<b>A</b>
	26. What advantage is there by increasing the number of falls on a hook block?
	<b>A</b>
	27. Explain the purpose of the over hoist limit switch.
	<b>A</b>
	28. Name THREE factors that determine the safe working load of the crane.
	<b>A</b>
	29. Why is it important to ensure the wheels are clear of the ground when outriggers are employed?
	<b>A</b>
	30. What is a Load Radius Indicator?
<b>A</b>	
31. Define the term 'Radius'.	
<b>A</b>	

*continued...*

Lifting equipment (cranes) continued	32. Describe how to calculate the area of support beneath a crane outrigger, which gives maximum possible safeguards against ground subsidence.
	<b>A</b>
	33. If a crane is out of level, what effect will it have on the radius?
	<b>A</b>
	34. What are the types of warning that an RCI will indicate?
	<b>A</b>
	35. To lift a load of 12 tonnes on a two point lift using single leg slings, what is the required SWL (WLL) for each sling with an included angle of 87 degrees? Please explain your calculation.
	<b>A</b>
	36. In what application have single leg slings been rated with their SWL (WLL)?
	<b>A</b>
	37. When and why are axle or suspension locks fitted to most mobile cranes?
	<b>A</b>
	38. According to BS 7121 part 1: a) what is the minimum number of allowable turns on the hoist drum and b) who decides the actual minimum for a given model of crane?
	<b>A</b>
39. Name THREE ways in which an operator can minimise their impact upon the environment whilst using a crane.	
<b>A</b>	
40. Name THREE ways that a crane supervisor can contribute in ensuring repeat business with the client or main contractor.	
<b>A</b>	
41. Where should the crane's Operator's Manual be kept and why?	
<b>A</b>	

*continued...*

Lifting equipment (cranes) continued	42. a) What is meant by the lifting capacity of the crane and b) who determines it?
	<b>A</b>
	43. What are the THREE actions or stages that a crane operator undertakes during pre-use inspections?
	<b>A</b>
	44. a) On a tower crane, where must the load radius diagram be located and b) what information must it contain?
	<b>A</b>
	45. A tower crane has been delivered to site, assembled and configured for lifting. What must be carried out before lifting starts and by whom?
<b>A</b>	
Lifting accessories	46. Name FIVE requirements that must be followed if accessing the end of the jib for maintenance purposes.
	<b>A</b>
	47. How does the deflection of the boom on a mobile crane or jib affect lift?
	<b>A</b>
	48. State the maximum recommended angle for single leg slings when used as a pair.
	<b>A</b>
	49. List FOUR items to be found on a chain sling inspection certificate.
<b>A</b>	
Lifting accessories	50. Name a design of accessory hook that is exempt from being fitted with a safety catch.
	<b>A</b>
	51. What is the maximum angle a bow shackle used as a pair on a crane hook can be used at?
	<b>A</b>
Lifting accessories	52. How long is a thorough examination for a lifting accessory valid for?
	<b>A</b>

*continued...*

Lifting accessories continued	53. How is the SWL/WLL/rated capacity for multi-legs slings determined?
	<b>A</b>
	54. Give TWO methods of obtaining the centre of gravity on an unbalanced load.
	<b>A</b>
Communication	55. If radios are to be used during the lifting operations, what FIVE actions and checks must be made before use?
	<b>A</b>
	56. What is the meaning of this hand signal (being demonstrated by the Tester)?
	<b>A</b>
Supervising	57. State the safe procedure to be followed before lifting or lowering a load down a shaft or excavation.
	<b>A</b>
	58. State SIX environmental factors that can affect an external lifting operation.
	<b>A</b>
	59. Why must a crane driver never try and 'drag' a load?
	<b>A</b>
	60. List TWO methods of obtaining the accurate weight of a load.
	<b>A</b>
	61. Identify FOUR requirements for ensuring the stability of mobile cranes on site.
	<b>A</b>
62. Give THREE examples of how excessive rain can affect an external lifting operation when using a mobile crane.	
<b>A</b>	
63. A replacement crane driver has been supplied to continue the lift. What must they be made aware of before further lifting can take place?	
<b>A</b>	

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Supervising continued	64. If setting up to lift loads near a pedestrianised area, what main factor needs to be taken into account?
	<b>A</b>
	65. a) What is the recommended minimum distance to be kept away from overhead power lines mounted on metal pylons and b) explain why a distance should be kept.
	<b>A</b>
	66. If a heavy load is being slewed at high speed over at least 180 degrees, what TWO factors must the operator and signaller take into account?
	<b>A</b>
	67. Two cranes are working in the same vicinity that encroach the operating radius of each. What actions would the lift plan or method statement normally specify?
	<b>A</b>
	68. At the end of the shift: a) in what position should luffing jibs on a tower crane be left in and b) why?
<b>A</b>	
69. During the lifting operation, part of the task cannot be carried out as detailed in the lift plan. a) What initially must happen to the lifting operation and b) who authorises any changes?	
<b>A</b>	