

Crawler Crane

A02

Technical Test – Theory

Roles and responsibilities	1. What is the definition of, or how can a hazard be described?
	A
	2. What is the purpose of a risk assessment?
	A
	3. List SIX typical subject areas that should be covered in a site induction.
	A
	4. What THREE main duties of The Health and Safety at Work Act must employees follow?
	A
	5. What does The Health and Safety at Work Act require employers to do with regards specifically to plant?
	A
	6. a) What is the purpose of a Method Statement and b) what is required of the operator?
	A
	7. 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?
	A
	8. Crane operators are generally regarded as ‘safety-critical’ workers. What does this mean?
	A

continued...

Roles and responsibilities continued	9. Name THREE ways in which an operator can minimise their impact upon the environment whilst using the machine.
	A
	10. State the functions or job role of the following personnel: a) Appointed Person, b) Crane Supervisor, c) Slinger, d) Signaller
	A
	11. In what situation does a hard hat NOT need to be worn when operating a crawler crane?
	A
	12. The operator has to use a new model of crawler crane that they are unfamiliar with. What do Regulations (i.e. LOLER 98) and other guidance require the operator to have?
	A
	13. What are the possible outcomes if being prosecuted for not complying with legislation and regulations?
	A
	14. Give TWO examples of where The Work at Height Regulations may apply to crawler crane operations.
	A
	15. How can a qualification or card benefit a crane operator?
	A
	16. Name THREE ways that a crane operator can contribute in ensuring repeat business with the client or main contractor.
	A

continued...

Preparing for work	17. Where should the Operator's Manual be kept and why?
	A
	18. What is the difference between a contract lift and a 'standard' crane hire?
	A
	19. a) What is meant by the lifting capacity of the crane and b) who determines it?
	A
	20. What is the purpose of a roll or ROPS frame?
	A
	21. What are the THREE actions or stages that a crane operator undertakes during pre-use inspections?
	A
	For questions 22 and 23 the Operator's Manual for the machine being used for the test MUST be available for reference by the candidate
	22. Using the Operator's Manual, state the figure for setting the track tension.
	A
	23. Using the Operator's Manual, state the cold-starting procedure for the machine.
	A
	24. What is the purpose of the hoisting limit switch (also known as the 'chandelier')?
	A
	25. A crawler crane has been delivered to site, assembled and configured for lifting. What must be carried out before lifting starts and by whom?
	A
	26. Which parts of the crane is the radius (for lifting) measured from?
	A

continued...

Preparing for work continued	27. If checking the oil level using a dipstick, why must gloves be worn?
	A
	28. Apart from the operator, who else may need to use the machine's Operator's Manual?
	A
	29. What is the purpose of counterweight(s) on the crane?
	A
	30. a) How does the number of lines or falls of rope affect the lifting capacity for the crane and b) how is hoist speed affected when the number of lines (or falls of rope) is reduced?
	A
	31. When would a fly jib or lattice extension be fitted and used?
A	
32. During work, the engine starts to overheat. Explain the danger if someone tries to remove the radiator or expansion tank cap.	
A	
Travelling and manoeuvring	33. If both travel levers are pushed forwards when the track motors are in front of the cab, in which direction would the machine move?
	A
	34. If the crane has to cross the public highway, the Road Traffic Act applies. a) What type of licence and which classes should the operator hold and b) what is the minimum age allowed?
	A
	35. a) What is the minimum distance allowed near open trenches when travelling the crane and b) explain why.
	A
36. When MUST a banksman or signaller be used before moving a crane?	
A	

continued...

Travelling and manoeuvring continued	37. Why must the seat belt be worn, even with the cab door closed?
	A
	38. If asked to travel with a suspended load, name FIVE factors that must be taken into account by the operator before moving
	A
Setting up for work	39. a) Which part of the crane applies loading or pressure to the ground and b) name TWO ways that pressure can be reduced.
	A
	40. If assisting in fitting a fly jib to the crane, why is it important that the manufacturers' procedures are followed precisely?
	A
	41. If a load of 40 tonnes is lifted on 4 falls or lines of rope, what is the tension in each fall or line?
	A
	42. Wind speeds can be variable throughout the working day. What action must be taken to ensure safe working conditions are maintained?
	A
	43. What is the main purpose of the Rated Capacity Indicator (RCI)?
	A
	44. When working in a confined area or space: a) what danger can be present with regards to the counterweight of the machine, b) what is the recommended minimum distance and c) what measures must be implemented if the gap is less?
	A
45. If setting up to lift loads in a pedestrianised area, state THREE factors that need to be taken into account.	
A	

continued...

Setting up for work continued	46. a) What is the recommended minimum distance to be kept away from overhead power lines mounted on metal pylons when setting up the machine and b) explain why a distance should be kept.
	A
	47. On a busy construction site, how would the slinger/signaller be identified to the crane operator?
	A
Working tasks	48. The number of falls has been changed on the hook block. How has this action affected the RCI?
	A
	49. The safe working load or working load limit (SWL/WLL) of a multi-leg chain sling only applies in what TWO conditions or configuration?
	A
	50. Name TWO things that happen if the hoist rope is not vertical when lifting a load.
	A
	51. Give FOUR reasons that may cause the crane to overturn.
	A
	52. If radios are to be used during the lifting operations, what FIVE actions and checks must be made by the crane operator before use?
	A
53. What makes up the total (or gross) weight of a load that is to be lifted?	
A	
54. Using the lifting capacity diagram (Annex A): a) what is the maximum lifting capacity and b) what is the lifting capacity in kg at 24 metre radius using a 32 metre boom/jib?	
A	

continued...

Working tasks continued	55. How does the rope or line length affect loads swings?
	A
	56. 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?
	A
	57. 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?
	A
	58. If the hook block inadvertently (accidentally) lands, what course of action should be taken?
	A
	59. Name THREE ways in which wind speed can affect the lifting operation.
	A
	60. What effect can a swinging load have on a crane?
	A
	61. If a load is slewed rather quickly, what TWO initial effects does it have on the load whilst slewing?
	A
	62. If the words STOP NOW are given to the crane operator by radio during the lift, what action must the operator take?
A	
63. Only two legs of an 8 tonne 4 legged chain sling are being used. What is the maximum load that can be lifted?	
A	
64. When slewing with a load, where should the operator be looking?	
A	
65. State the possible effect of lifting downhill on a slope.	
A	

continued...

Working tasks continued	66. How does the deflection of the boom or jib affect lift?
	A
Working tasks continued	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?
	A
Completing work	68. Before leaving the cab for a rest break, after parking and switching off the machine, what final action must be carried out?
	A
Shutdown	69. When parking the machine at the end of the shift, name THREE places where the machine should NOT be parked.
	A
	70. The operator has been asked to drive the machine onto a transporter/trailer. a) Who is responsible for the loading operations and b) state FOUR actions to be considered by the operator before loading commences.
	A
	71. Why should the crane be re-fuelled at the end of the day?
A	