

Wheeled Loading Shovel

A21

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. Plant 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. In what situation does a hard hat NOT need to be worn when operating a loading shovel?
	A
	11. The operator has to fit and use a new bucket using a quick-hitch coupler that they are unfamiliar with. What do Regulations (i.e. PUWER 98) and other guidance require the operator to have?
	A
	12. What are the possible outcomes if being prosecuted (by judicial bodies) for not complying with legislation and regulations?
	A
	13. Give TWO examples of where The Work at Height Regulations 1995 may apply to loading shovel operations.
	A
	14. How can a qualification or card benefit a plant operator?
	A
	15. Name THREE ways that a plant operator can contribute in ensuring repeat business with the client or main contractor.
	A
	Preparing for work
A	
17. If the operator has to top-up the hydraulic oil, state TWO precautions to ensure cleanliness of the system.	
A	
	18. What is the purpose of a roll or ROPS frame?
	A

continued...

Preparing for work continued	For questions 19 and 20 the Operator’s Manual for the machine being used for the test MUST be available for reference by the candidate
	19. Using the Operator’s Manual, state the figure for the tyres’ operating pressure.
	A
	20. Using the Operator’s Manual, state the cold-starting procedure for the machine.
	A
	21. Many loading shovels have 'limited-slip' axles. How can this help production?
	A
	22. If checking the oil level using a dipstick, why must gloves be worn?
	A
	23. How are loading shovel bucket sizes calculated?
	A
	24. Apart from the operator, who else may need to use the machine’s Operator’s Manual?
	A
	25. What is the purpose of the counterweight of the machine?
A	
26. 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	27. Most loading shovels have an articulated chassis that swivels or pivots in the centre. One pivot plane or angle (looking from the top) provides the steering (articulation), what is the function of the other pivot plane or angle i.e. looking from the front (oscillation)?
	A
	28. a) Give ONE advantage and b) TWO disadvantages of rear mounted cameras.
A	

continued...

Travelling and manoeuvring continued	29. An operator has been asked to carry some material down a small section of the public highway, for which the Road Traffic act applies. What are the implications for the operator and machine?
	A
	30. If the loading shovel is being travelled or working on the public highway, including adjacent pavement and verges, 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
	31. Name THREE conditions that mirrors must be in, on the machine.
	A
	32. Why must the seat belt be worn, even with the cab door closed?
	A
	33. What problems and hazards can soft ground cause to a loaded loading shovel?
	A
	34. a) Name THREE purposes of the raised lugs on tyres and b) what can happen to a loading shovel if the lugs are severely worn?
	A
	35. When travelling on wet clay or rock, what effect does this have on the loading shovel?
	A
36. a) What is the minimum distance allowed near open trenches when travelling with a loaded loading shovel and b) explain why.	
A	
37. Give FOUR reasons that may cause the loading shovel to tip over sideways.	
A	

continued...

Setting up for work	38. Whenever possible, who should decide the positioning of the dump truck when being loaded?
	A
	39. Explain ALL visual checks that must be carried out on all types of quick-hitch bucket attaching systems before use.
	A
	40. On a semi-automatic quick-hitch bucket attaching system: a) what is the purpose of the safety pin and b) what checks MUST be made to the pin before use?
	A
	41. Give THREE possible reasons why loading shovels should not stray off the designated travel routes.
	A
	42. Describe ONE physical method of checking that the attachment is fully secured to the coupler prior to work.
	A
	43. If setting up to work in a pedestrianised area, state THREE factors that need to be taken into account?
	A
	44. What is regarded as the most productive position for the dump truck to be in when being loaded by a wheeled loading shovel working from a stockpile?
	A
45. Before manually changing any bucket: a) where should the bucket be positioned (in relation to the ground) before removing the final pin and b) why?	
A	

continued...

Setting up for work continued	46. Give TWO reasons why the loading shovel operator should have an understanding of the type of material being loaded.
	A
Working tasks	47. 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
	48. The operator is asked to tip material into a trench. State FIVE different requirements that must be considered or implemented before tipping commences.
	A
	49. Why should different materials be segregated during extracting?
	A
	50. Who should determine the maximum load that should be placed into the body of the dump truck?
	A
	51. If a load has to be tipped on a slope, what may happen if the load is tipped downhill and why?
	A
	52. When working in a confined area or space, name THREE hazards that can occur.
	A
53. a) What is the recommended minimum distance to be kept away from overhead power lines mounted on wooden poles when tipping loads and b) explain why a distance should be kept.	
A	

continued...

Working tasks continued	54. State TWO requirements of using a stop block or earth bank (berm) at a trench discharging point.
	A
	55. When constructing a ramp to load a crusher, name THREE considerations to take into account.
Working tasks continued	A
	56. Smaller loading shovels may be equipped with a clamshell bucket. Name TWO functions of this type of bucket.
	A
Completing work	57. Many loading shovels have a turbo-charged engine. a) What is the normal procedure before switching off the engine after working and b) what happens if the procedure is not followed?
	A
Completing work	58. Before leaving the cab for a rest break, after parking and switching off the machine, what final action must be carried out?
	A
Shutdown	59. When parking the machine at the end of the shift, name THREE places where the machine should NOT be parked.
	A
	60. 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
	61. If the operator has loaded the machine onto a transporter/trailer on behalf of a driver, what checks must be carried out before they leave the cab?
Shutdown	A
	62. Why should a loading shovel be re-fuelled at the end of the day?
Shutdown	A
	A