

Dump Truck
Rigid Chassis

A57
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 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 dump truck?
	A
	11. The operator has to use a new type of dump truck 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 for not complying with legislation and regulations?
	A
	13. Give TWO examples of where The Work at Height Regulations may apply to dump trucks.
	A
	14. How can a qualification or card benefit a plant operator?
	A
	15. What is a dump truck operator's main purpose or requirement?
	A
Preparing for work	16. Name THREE ways that a plant operator can contribute in ensuring repeat business with the client or main contractor.
	A
	17. Where should the dump truck's Operator's Manual be kept and why?
	A
	18. What is a possible consequence of using a tyre with a deep cut in the sidewall?
A	
	19. When would the body safety strut or support be used?
	A

continued...

Preparing for work continued	20. If the operator has to top-up the hydraulic oil, state TWO precautions to ensure cleanliness of the system.
	A
	For questions 21 and 22 the Operator's Manual for the machine being used for the test MUST be available for reference by the candidate
	21. Using the Operator's Manual, state the figure for tyres' operating pressure. For tracked units, state checks needed to be made to the track belts.
	A
	22. Using the Operator's Manual, state the cold-starting procedure for the machine.
	A
	23. If fitted, name the purpose of having independent front suspension.
	A
	24. If checking the oil level using a dipstick, why must gloves be worn?
	A
	25. Apart from the operator, who else may need to use the machine's Operator's Manual?
	A
	26. What is the purpose of a ROPS cab?
	A
	27. A dump truck is classified by a manufacturer as a 60 tonne machine. What does this mean?
	A
	28. Why do most dump trucks have a sloping body tail?
	A
	29. On start up, the air pressure on the machine is low. What actions must the operator carry out before work and during work?
	A
	30. 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	31. a) State the purpose of a retarder and b) and the possible consequences of not using it when required.
	A
	32. a) Name THREE purposes of the raised lugs on tyres and b) what can happen to a dump truck if the lugs are severely worn?
	A
	33. What problems and hazards can soft ground cause to a loaded dump truck?
	A
	34. a) Give ONE advantage and b) TWO disadvantages of rear mounted cameras.
	A
	35. a) What is the minimum distance allowed near open trenches when travelling with a dump truck and b) explain why.
	A
	36. If the machine is being travelled or working on the public highway, including adjacent pavements and verges, the Road Traffic Act applies. a) What type of licence and which class should the operator hold and b) what is the minimum age allowed?
	A
	37. When travelling on wet clay, what effect does this have on the dump truck?
	A
38. Why must the seat belt be worn at all times, even with the cab door closed?	
A	
39. Name THREE conditions that the mirrors on the machine must be in.	
A	
40. Give THREE possible reasons why dump trucks should not stray off the designated haul routes.	
A	

Setting up for work	41. If setting up to work in a pedestrianised area, state THREE factors that need to be taken into account.
	A
	42. Whenever possible, who should decide the positioning of the dump truck for loading?
	A
	43. The operator is asked to tip material into a new trench. State FIVE different requirements that must be considered or implemented before tipping commences.
A	
Working tasks	44. Give TWO reasons why the dump truck operator should have an understanding of the type of spoil being transported.
	A
	45. Why should tail gates not be fitted when transporting bulky or rock type material?
	A
	46. When working in a confined area or space, name THREE hazards that can occur.
	A
	47. 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
48. a) Why should the body of the dump truck be raised slowly/carefully especially with wet or sticky material and b) what would be a consequence if this was not done?	
A	
49. Who should determine the maximum load that should be placed into the body of the dump truck?	
A	

continued...

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Working tasks continued	50. State TWO requirements of using a stop block or earth bank (berm) at a trench discharging point.
	A
	51. When tipping a load, the centre of gravity of the machine changes. a) How does this affect the dump truck and b) state TWO actions to avoid accidents?
	A
	52. If a load has to be tipped on a slope, what may happen if the load is tipped downhill and why?
	A
	53. An operator has been asked to transport a load down a small section of the public highway, for which the Road Traffic Act applies. What effect does this have on dump truck operations?
	A
	54. 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
Completing work	55. What is the meaning of this hand signal (being demonstrated by the Tester)?
	A
	56. Operators should lower the body fully before driving away. Give TWO possible consequences if this is not carried out.
A	
Completing work	57. Before leaving the cab for a rest break, after parking and switching off the machine, what final action must be carried out?
	A

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Shutdown	58. Many dump trucks have a turbo-charged engine. a) What is the normal procedure before switching of the engine after working and b) what happens if the procedure is not followed?
	A
	59. When parking the machine at the end of the shift, name THREE places where the dump truck should NOT be parked.
	A
	60. Why should a dump truck be re-fuelled at the end of the day?
	A
	61. 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
62. If the operator has loaded the machine onto a transporter/trailer on behalf of a driver, state THREE actions that must be carried out before they leave the machine.	
A	

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Technical Test – Practical

RESOURCES

Required

Machine	<ul style="list-style-type: none"> • Rigid rear-tipping dump truck
Area	<ul style="list-style-type: none"> • Ground, clear of hazards which must include: <ul style="list-style-type: none"> – rough undulating terrain – slope or slopes – a stockpile of material for loading – a straight run for reversing – trench or edge for unloading purposes
Other equipment	<ul style="list-style-type: none"> • Machine to load material • Edge protection • Items to create restrictions for manoeuvring
Loads	<ul style="list-style-type: none"> • Suitable and sufficient material for loading and discharging
Notes	<ul style="list-style-type: none"> • The machine selected for the test must meet the specification for the required endorsement, be in serviceable condition and conform with current legislation • The operator's manual must be with the dump truck • The slope must have at least an 18% (1:5.5) incline with sufficient manoeuvring room at the top, or a straight ramp with an up and down route with a flat area at the summit • The straight run for reversing must be at least 50 metres long • The trench or an edge must be at least 1 x metre deep and a minimum of 3 x the machine's width • Edge protection must be of substantial build to restrain a machine from inadvertently entering the trench

ACTIVITY

Instructions

Sequence	<ul style="list-style-type: none"> • Activity 1 must be undertaken at the start of the test • Activity 2 may be spread over the period of the test • Activity 7 must be undertaken at the end of the test <p>The test must be completed within a given time. The specifications' section gives further information.</p>
Preparing for work	1 Complete all manufacturers' pre-start and running checks and prepare the dump truck for travel
Travelling & manoeuvring (refer to specifications)	2 In a loaded and unloaded state: <ul style="list-style-type: none"> – travel up and down the slope – stop and start on the slope in the up direction – stop and start on the slope in the down direction – stop on the slope in the down direction and reverse back up for a minimum of 5 metres – drive through a restriction (unladen only) – travel over rough terrain – reverse (loaded only) in a straight line for a minimum of 50 metres and pass through a restriction at the end of the run
Setting up for work	3 Position dump truck for loading
Working tasks (refer to specifications)	4 Receive a load 5 Discharge the load into the edge or excavation
Completing work	6 Clean out the body fully
Shutting down	7 Park the dump truck and carry out shut-down and securing procedures
Notes	<ul style="list-style-type: none"> • If the machine is hot, checks unable to be carried out (i.e. coolant) may be assessed by the Tester using verbal questions

Activity measurements

Travelling restriction	<ul style="list-style-type: none"> • 800 mm
Reversing restriction	<ul style="list-style-type: none"> • 1 metre
Discharging	<ul style="list-style-type: none"> • Minimum of 3 times (activity 5)
Test timings	<ul style="list-style-type: none"> • The test must be completed within 1 hour and 45 minutes

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Basic details	Test ref.	Candidate name
	Tester name	Candidate ref.
	Tester ref.	Date of test
	Endorsement: A <input type="checkbox"/> B <input type="checkbox"/> C <input type="checkbox"/> D <input type="checkbox"/>	Start time of test
	Make and model	Duration

MANDATORY		Correctly carried out during the test?	Y / N
Preparing	1 All pre-start and running checks (or responses to relevant questions)		
Travelling	2 Dump truck set for travel		
	3 Restrictions cleared		
	4 Encountered hazards cleared		
	5 Full control maintained when ascending and descending slopes		
	6 No opposite movement of intended direction when restarting on slopes		
Setting up	7 Straight line kept for loaded reversing activity		
	8 Allocated area checked and clear of hazards prior to being loaded		
Working	9 Safe place selected during loading		
	10 Appropriate speed used when reversing to the discharge point		
	11 Edge protection applied or checked and used prior to discharging load		
	12 Parking brake applied and neutral selected before discharging loads		
	13 Vehicle marginally moved forward after discharging to clear body		
Completing	14 Body fully lowered before leaving discharge point		
Shutdown	15 Body clean of material		
Other	16 All shutdown and securing procedures		
	17 Legislation, manufacturers' and health and safety requirements complied with		
	18 Test completed within the given time		

All of these items must be awarded

Achieved / Not achieved

FAULTS		Candidate incorrectly carried out the following:	Fault	Mark	Penalty
Travelling	1	Dump truck mounting and dismounting		1	
	2	Full observation before moving and reversing		3	
	3	Full observation whilst travelling		2	
	4	Transmission drive engaged smoothly from rest		2	
	5	Travel speed matched to the ground type and conditions		2	
	6	Gear ratios matched to ground speed		1	
Working	7	Dump truck positioned correctly for loading		2	
	8	Dump truck positioned square to the discharge edge prior to discharging		2	
	9	Body fully emptied after discharging		2	
	10	Smooth use of steering and braking controls		3	
Not exceeded 8 penalties			Total penalties		
Achieved / Not achieved					

