

Piling Rig

Driven below 15 tonnes

A45

Technical Test – Theory

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| 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. Rig operators are generally regarded as 'safety-critical' workers. What does this mean? |
| | A |

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| 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 piling rig? |
| | A |
| | 11. The operator has to use a new model of rig 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 piling rig operations. |
| | A |
| Preparing for work | 14. How can a qualification or card benefit a rig operator? |
| | A |
| | 15. Name THREE ways that a rig operator can contribute in ensuring repeat business with the client or main contractor. |
| | A |
| | 16. Where should the Operator’s Manual be kept and why? |
| A | |
| Preparing for work | 17. What is the purpose of a roll or ROPS frame? |
| | A |
| | 18. What are the THREE actions or stages that a rig operator undertakes during pre-use inspections? |
| A | |

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| 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 setting the track tension. |
| | A |
| | 20. Using the Operator's Manual, state the cold-starting procedure for the machine. |
| | A |
| | 21. A piling rig has been delivered to site, assembled and configured for work. What must be carried out before piling starts and by whom? |
| | A |
| | 22. If checking the oil level using a dipstick, why must gloves be worn? |
| | A |
| | 23. List FIVE checks that should be made to the tracks and running gear. |
| | A |
| | 24. Name THREE different types of driven hammers. |
| | A |
| | 25. Where would you find the dolly on a percussive driven hammer? |
| | A |
| 26. Name THREE different types of driven pile. | |
| A | |
| 27. What is the purpose of a cofferdam? | |
| 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 rig? | |
| A | |
| 30. During work, the engine starts to overheat. Explain the danger if someone tries to remove the radiator or expansion tank cap. | |
| A | |

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| Travelling and manoeuvring | 31. 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 |
| | 32. If the rig 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 |
| | 33. a) What is the minimum distance allowed near open trenches when travelling the rig and b) explain why. |
| | A |
| | 34. When MUST a banksman or signaller be used before moving a rig? |
| | A |
| 35. Why must the seat belt be worn when travelling, even with the cab door closed? | |
| A | |
| Setting up for work | 36. a) Which part of the rig applies loading or pressure to the ground and b) name TWO ways that pressure can be reduced. |
| | A |
| | 37. What checks and procedures need to be made before a 'permit to dig' can be issued? |
| | A |
| | 38. Wind speeds can be variable throughout the working day. What action must be taken to ensure safe working conditions are maintained? |
| | A |
| 39. 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 | |

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| Setting up for work continued | 40. If setting up to pile near a pedestrianised area, state THREE factors that need to be taken into account. |
| | A |
| Setting up for work continued | 41. 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 |
| Working tasks | 42. What is meant by ‘toeing in’ when referring to the piling activity? |
| | A |
| | 43. What does ‘backdriving’ mean? |
| | A |
| | 44. What is meant by the term ‘refusal’? |
| | A |
| | 45. What is meant by ‘splicing’? |
| | A |
| | 46. What is meant by the term ‘raking angle’? |
| | A |
| | 47. What is a ‘driven cast in-situ’ pile? |
| | A |
| Working tasks | 48. Give THREE reasons that may cause the rig to overturn. |
| | A |
| Working tasks | 49. If radios are to be used during the piling operations, what FIVE actions and checks must be made by the rig operator before use? |
| | A |
| Working tasks | 50. During the piling operation, part of the task cannot be carried out as detailed in the lift plan. a) What initially must happen to the piling operation and b) who authorises any changes? |
| | A |

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| Working tasks continued | 51. In driven piling, what is meant by the 'drop height'? |
| | A |
| | 52. How can the noise level of the hammering operation be reduced on: a) pre-cast types and b) cast in-situ types? |
| | A |
| | 53. Why are driven piles generally used on contaminated sites? |
| | A |
| | 54. What is the function of the shoe as used in cast in-situ piling? |
| | A |
| | 55. What are pre-cast piles most suitable for? |
| | A |
| Completing work | 56. If the words STOP NOW are given to the rig operator by radio during the lift, what action must the operator take? |
| | A |
| Shutdown | 57. a) What is meant by the lifting capacity of the rig and b) who determines it? |
| | A |
| | 58. Before leaving the cab for a rest break, after parking and switching off the machine, what final action must be carried out? |
| | A |
| | 59. When parking the machine at the end of the shift, name THREE places where the machine should NOT be parked. |
| | A |
| Shutdown | 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? |
| | A |
| Shutdown | 62. Why should the rig be re-fuelled at the end of the day? |
| | A |