

Appointed Person

A61

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.
	A
	2. State why there must be a safe system of work.
	A
	3. Name TWO duties of the crane operator.
	A
	4. Name FOUR items that must be recorded when a thorough examination on a lifting appliance has been carried out.
	A
	5. What is the Factor of Safety when lifting personnel?
	A
6. Who has overall control of the lifting operation?	
A	
7. When a crane company hires out a crane, name TWO main legal requirements the hire company must meet regarding the crane and driver.	
A	
8. To whom should the appointed person give all details involving the lifting operation?	
A	
9. Who is responsible for providing the contractor with written details of the work to be done?	
A	
10. Name TWO possible penalties for not following legal requirements when using a crane.	
A	

continued...

Legislative and regulative continued	11. Which part of BS 7121 is specific to mobile cranes?
	A
	12. State which bodies have to be notified when planning a lift on or near by: a) Rivers, b) Airfields, c) Highways, d) Railways, e) Live plant.
	A
	13. What is the definition of a competent person as stated by Codes of Practice?
	A
	14. State ONE difference between a regulation and a Code of Practice.
	A
	15. What types of crane are not covered by BS 7121?
	A
	16. State the legislation and the regulation therein that refers to the stability of cranes.
	A
	17. What is the main aim of the HASWA 1974?
A	
18. Name two possible penalties for not following legal requirements when using a crane.	
A	
19. What does The Health and Safety at Work Act require employers to do with regards specifically to plant?	
A	
Lifting equipment (cranes)	20. What is the minimum recommended distance that is allowed between the counterweight(s) of the crane and another object/structure?
	A
	21. Explain the purpose of the over hoist limit switch.
A	

continued...

Lifting equipment (cranes) continued	22. Name THREE factors that determine the safe working load of the crane.
	A
	23. What is a Load Radius Indicator?
	A
	24. Define the term 'Radius'.
	A
	25. Describe how to calculate the area of support beneath a crane outrigger, which gives maximum possible safeguards against ground subsidence.
	A
	26. If a crane is out of level, what effect will it have on the radius?
	A
	27. 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.
	A
	28. In what application have single leg slings been rated with their SWL (WLL)?
	A
29. When and why are axle or suspension locks fitted to most mobile cranes?	
A	
30. What advantage is there by increasing the number of falls on a hook block?	
A	
31. What does the term 'structural strength' relate to with regard to the lifting capacity of the crane?	
A	

continued...

Lifting equipment (cranes) continued	32. What is a Load Radius Indicator?
	A
	33. What are the types of warning that an RCI will indicate, and at what point are they activated?
	A
	34. a) Where must the load radius diagram on a tower crane be located and b) what information must it contain?
A	
Lifting accessories	35. How does the deflection of the boom on a mobile crane or jib affect lift?
	A
	36. State the maximum recommended angle for single leg slings when used as a pair.
	A
	37. List FOUR items to be found on a chain sling inspection certificate.
	A
	38. Name a design of accessory hook that is exempt from being fitted with a safety catch.
	A
	39. What is the maximum angle a bow shackle used as a pair on a crane hook can be used at?
	A
	40. How long is a thorough examination for a lifting accessory valid for?
	A
	41. How is the SWL/WLL/rated capacity for multi-legs slings determined?
	A
42. Give TWO methods of obtaining the centre of gravity on an unbalanced load.	
A	
43. If a load of 20 tonnes is lifted on 4 falls of rope, what is the tension in each fall?	
A	
44. Name three markings found on multiple leg slings.	
A	

continued...

Lifting accessories continued	45. State the sling angle if the distance between the lifting points is one and a half times the leg length.
	A
Lifting accessories continued	46. What is the Factor of Safety for chains?
	A
Communication	47. If radios are to be used during the lifting operations, what FIVE actions and checks must be made before use?
	A
	48. Using simple graphics draw the recommended hand signals for: a) emergency stop and b) hoist up.
	A
Communication	49. Why is it recommended to complete a report after the completion of the lifting operation?
	A
	50. State the safe procedure to be followed before lifting or lowering a load down a shaft or excavation.
	A
Planning	51. State SIX environmental factors that can affect an external lifting operation.
	A
	52. Why must a crane driver never try and 'drag' a load?
	A
	53. List TWO methods of obtaining the accurate weight of a load.
	A
	54. Identify FOUR requirements for ensuring the stability of mobile cranes on site.
	A

continued...

Planning continued	55. Give THREE examples of how excessive rain can affect an external lifting operation when using a mobile crane.
	A
	56. A replacement crane driver has been supplied to continue the lift. What must they be made aware of before further lifting can take place?
	A
	57. During dismantling operations, what is the recommended percentage of de-rating if lifting a load from height where the weight has been estimated?
	A
	58. Give one reason why it is not advised to lift a single load using the fly hook block and main hook block.
	A
	59. Name the section in BS 7121 where advice is given if carrying out 'free-on-wheels' duties.
	A
	60. Explain the additional requirements of a standard lift over a basic lift.
	A
	61. With a bearing load of 14,000 kg and an outrigger base of 1m square, what would be the resultant ground pressure in kg?
	A
	62. Define the term 'outreach'.
A	
63. During dismantling operations, what is the recommended percentage of de-rating if lifting a load from height where the load has been estimated?	
A	
64. Where a scale drawing is being used, if the scale used is 1:200, what is the 1 cm equivalent to?	
A	
65. If planning to lift loads in or near a pedestrianised area, what main factor needs to be taken into account?	
A	

continued...

Planning continued	66. 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.
	A
	67. Two cranes are working in the same vicinity that encroach the operating radius of each. What actions should the lift plan or method statement normally specify?
	A