

No.	Question	Answers	Max. Mark
1	What makes up the total (or gross) weight of a load that is to be lifted?		3
2	During work, the engine starts to overheat. Explain the danger if someone tries to remove the radiator or expansion tank cap.		2
3	What is the definition of, or how can a hazard be described?		3
4	What are the possible outcomes of facing prosecution for not complying with legislation and regulations?		3
5	a) What is meant by the lifting capacity of the crane and b) who determines it?		2
6	Give FOUR reasons that may cause the crane to overturn.		4
7	What THREE main duties of The Health and Safety at Work Act must employees follow?		6
8	Name TWO things that happen if the hoist rope is not vertical when lifting a load.		2
9	Using the Operator's Manual, state the figure for the tyre pressures. Note: The Operator's Manual for the machine being used for the test MUST be available for reference by the candidate.		2
10	What is the main purpose of the Rated Capacity Indicator (RCI)?		3

11	Using the lifting capacity diagram for A60: a) what is the maximum lifting capacity, b) what boom extension is required for a load weighing 7.6 tonnes needed to be placed at 15 metres radius and c) what counterweight is required?		6
12	Before leaving the cab for a rest break, after parking and switching off the machine, what final action must be carried out?		2
13	On a busy construction site, how would the slinger/signaller be identified to the crane operator?		1
14	When working in a confined area or space: a) what danger can be present with regards to the counterweight of the machine, b) when should measures be taken and c) what measures should be implemented?		3
15	If a load is being slewed too fast for its size, what TWO factors must the operator and signaller take into account?		4
16	Give TWO examples of where The Work at Height Regulations may apply to mobile crane operations.		2
17	How can a qualification or card benefit a crane operator?		1
18	State the functions or job role of the following personnel: a) appointed person, b) crane supervisor, c) slinger, d) signaller.		4
19	What is the purpose of a risk assessment?		2
20	What is meant by the footprint of the crane?		1
21	If checking the oil level using a dipstick, why must gloves be worn?		1
22	Using the Operator's Manual, state the cold-starting procedure for the crane (can be the drive engine or auxiliary engine). Note: The Operator's Manual for the machine being used for the test MUST be available for reference by the candidate.		2

23	Crane operations fall within the scope of the Lifting Operations and Lifting Equipment Regulations (LOLER) 1998. Name TWO requirements of the regulations with regards to lifting.		2
24	If setting up to lift loads in a pedestrianised area, state THREE factors that need to be taken into account.		3
25	When parking the machine at the end of the shift, name THREE places where the machine should NOT be parked.		3
26	Why are crane operators generally regarded as 'safety-critical' workers?		4
27	If radios are to be used during the lifting operations, what FIVE actions and checks must be made by the crane operator before use?		5
28	Which parts of the crane is the radius (for lifting) measured from?		2
29	What is the meaning of this hand signal (being demonstrated by the Tester)?		1
30	The safe working load or working load limit (SWL/WLL) of a multi-leg chain sling only applies in what TWO conditions or configuration?		2
31	Only two legs of an 8 tonne four-legged chain sling are being used. What is the maximum load that can be lifted?		1
32	Name FOUR different types or levels of disciplinary actions or sanctions that can be applied (by employers and judicial bodies) to operators of plant who do not comply with, or follow legislation and regulations.		4
33	List SIX typical subject areas that should be covered in a site induction.		3
34	What is the purpose of the hoisting limit switch (also known as the 'chandelier')?		1
35	a) What is the minimum distance allowed near open trenches when travelling the crane and b) explain why?		2

36	Name THREE ways that a crane operator can contribute in ensuring repeat business with the client or principal contractor.		3
37	In what situation does a hard hat NOT need to be worn when operating a mobile crane?		2
38	When slewing with a load, where should the operator be looking?		1
39	a) What is the purpose of a Method Statement and b) what is required of the operator?		4
40	Why must the seat belt be worn, even with the cab door closed?		2
41	What does The Health and Safety at Work Act require employers to do with regards specifically to plant?		3
42	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?		2
43	As a lifting machine, the crane must be thoroughly examined. a) What is the purpose of the examination and b) who would carry out the examination?		2
44	Apart from the operator, who else may need to use the machine's Operator's Manual?		1
45	a) Which part of the crane applies loading or pressure to the ground and b) name TWO ways that pressure can be reduced.		3
46	Wind speeds can be variable throughout the working day. What action must be taken to ensure safe working conditions are maintained?		1
47	What effect can a swinging load have on a crane?		1
48	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?		2

49	Name THREE ways in which an operator can minimise their impact upon the environment whilst using the machine.		3
50	If a load is slewed rather quickly, what TWO initial effects does it have on the load whilst slewing?		2
51	The operator has to use a new model of mobile crane that they are unfamiliar with. What do Regulations (i.e. LOLER 98) and other guidance require the operator to have?		3
52	a) What determines the minimum distances that any part of plant and machinery has to be kept from overhead electricity lines and b) explain why a distance should be kept.		4
53	What is the purpose of a roll over ROPS frame?		2
54	If the hook block inadvertently (accidentally) lands, what course of action should be taken?		2
55	When must a banksman or signaller be used before moving a crane?		2
56	The number of falls has been changed on the hook block. How has this action affected the RCI?		2
57	If a load of 40 tonnes is lifted on four falls or lines of rope, what is the tension in each fall or line?		1
58	Why should a crane be re-fuelled at the end of the day?		1
59	As the crane rotates through 360 degrees with a load, what happens to the loading on each outrigger or wheel?		2
60	When would a fly jib or lattice extension be fitted and used?		1
61	Name THREE ways in which wind speed can affect the lifting operation.		3

62	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?		2
63	Where should the Operator's Manual be kept and why?		2
64	If the words STOP NOW are given to the crane operator by radio during the lift, what action must the operator take?		2
65	If the crane has to travel on 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?		2
66	What is the purpose of counterweight(s) on the crane?		1
67	Name TWO ways that wet weather can affect lifting operations.		2
68	If asked to travel with a suspended load, name FIVE factors that must be taken into account by the operator before moving.		5
69	An operator has been asked to pick and carry a load down a small section of the public highway, for which The Road Traffic Act applies. What effect does this have on crane operations?		2
70	How does the deflection of the boom or jib affect the lift?		2
71	What is the difference between a contract lift and a 'standard' crane hire?		2
72	What are the THREE actions or stages that a crane operator undertakes during pre-use inspections?		3
73	a) Who only can authorise partial outrigger extensions and b) what is the effect on lifting capacity by partially extending the outriggers?		2

Lifting capacities on telescopic boom

Liebherr LTM 1055 - 3

m	10,2 - 40 m											m
	10,2 m	13,6 m	17 m	20,5 m	23,9 m	27,3 m	30,8 m	34,2 m	37,6 m	40 m		
2,5	55											2,5
2,7	53											2,7
3	51	49										3
3,5	47	44,5	44,5	42,5								3,5
4	43,5	41	41	38,5	36,5							4
4,5	39,5	37,5	37,5	35	33	31						4,5
5	37	34,5	34,5	33	31,5	30,5	23,3					5
6	31,5	28,8	29	29,1	27,9	26,8	20,9	18,5	15,1			6
7	26	24,1	24,4	24,9	23,2	22,2	18,9	16,9	14,8	12,1	10,1	7
8			20,9	21,2	20,2	18,9	17,2	15,6	13,9	11,4	10	8
9			17,6	17,9	17,4	16,3	15,7	14,3	13,1	10,9	9,5	9
10			14,9	15,2	15,1	14,3	13,8	13	12,2	10,4	9,1	10
12				11,4	11,4	11,6	11,4	10,8	10,2	9,5	8,4	12
14				9,1	9,2	9,3	9,1	8,9	8,6	8,4	7,8	14
16					7,7	7,6	7,4	7,5	7,5	7	6,9	16
18						6,4	6,5	6,3	6,3	5,9	5,8	18
20						5,4	5,5	5,4	5,3	5,1	5	20
22							4,7	4,6	4,5	4,2	4,1	22
24							4,1	4	3,8	3,6	3,5	24
26								3,4	3,3	3,1	3,1	26
28								3	2,9	2,7	2,6	28
30									2,5	2,3	2,3	30
32										2	2	32
34										1,7	1,7	34
36											1,5	36

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