

# Technical Test Theory

## Excavator 180 above 5 tonnes A12



No.	Question
1	Explain ALL visual checks that must be carried out on all types of quick-hitch bucket attaching systems before use.
2	What is regarded as the most productive position for the dump truck or tipper to be in when being loaded with a 180 excavator working from a stockpile?
3	With regards to lifting accessories, irrespective of who supplied the accessories, what THREE factors should be ensured before the accessories are used?
4	What is the purpose of a roll or ROPS frame?
5	Why must excavator operators not begin to load vehicles until the forward-tipping dumper driver is clear of their machine?
6	In what situation does a hard hat NOT need to be worn when operating a 180 excavator?
7	What particular and specific hazards can affect the stability of the machine when working on old industrial (brownfield) sites?
8	Apart from the operator, who else may need to use the machine's Operator's Manual?
9	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.
10	Give TWO examples of where The Work at Height Regulations may apply to 180 excavator operations.
11	On stabiliser-equipped machines, what must be checked before the stabilisers are lowered?
12	Name TWO types of equipment used to ensure that excavation levels, measurements and positions are to the required specification.

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13	What is the nearest distance allowed to gas pipes when excavating with the machine?
14	What is the meaning of this hand signal (being demonstrated by the Tester)?
15	Name THREE ways that a plant operator can contribute in ensuring repeat business with the client or principal contractor.
16	If loading a tipper vehicle, who should determine the maximum load that should be placed into the body?
17	What are the possible outcomes of facing prosecution for not complying with legislation and regulations?
18	Name FOUR possible functions of a multi-purpose clamshell bucket (excluding the forks).
19	During work, the engine starts to overheat. Explain the danger if someone tries to remove the radiator or expansion tank cap.
20	Name THREE ways in which an operator can minimise their impact upon the environment whilst using the machine.
21	Using the Operator's Manual, state the tyres' operating pressure. Note: The Operator's Manual for the machine being used for the test MUST be available for reference by the candidate.
22	Before leaving the cab for a rest break, after parking and switching off the machine, what final action must be carried out?
23	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?
24	Give TWO reasons why, wherever possible, operators should excavate the ground in layers.

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25	If setting up to work in a pedestrianised area, state THREE factors that need to be taken into account.
26	What is the definition of, or how can a hazard be described?
27	What is a possible consequence of using a tyre with a deep cut in the sidewall?
28	If a trench has a depth of 2 metres: a) What is the minimum distance to maintain from the edge of the trench when placing spoil and b) explain why?
29	Give FOUR reasons that may cause the excavator to tip over sideways.
30	Explain a possible danger if the excavator is lifting a load on sloping ground, even though the load chart indicates that the machine can lift that load.
31	List SIX typical subject areas that should be covered in a site induction.
32	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?
33	What does the Health and Safety at Work Act require employers to do with regards specifically to plant?
34	The operator is asked to tip material into a trench. State FIVE different requirements that must be considered or implemented before tipping commences.
35	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?
36	If using the forks to lift loads, what machine-related information is needed?

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37	What THREE main duties of the Health and Safety at Work Act must employees follow?
38	If setting up to excavate in a confined area, name TWO things that should be taken into account before starting.
39	Why should different soils be segregated during excavating?
40	Using the Operator's Manual, state the cold-starting procedure for the machine. Note: The Operator's Manual for the machine being used for the test MUST be available for reference by the candidate.
41	If the excavator 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 classes should the operator hold and b) what is the minimum age allowed?
42	If a load is lifted using the backhoe unit that is in line with the machine, when slewing the load fully to the left or right, the machine can become unstable. Explain why.
43	Describe ONE physical method of checking that a bucket is fully secured to the quick-hitch coupler prior to work.
44	If the operator has to top-up the hydraulic oil, state TWO precautions to ensure cleanliness of the system.
45	After shutting down the engine, why should the hydraulic operating levers be cycled?
46	Why must the seat belt be worn, even with the cab door closed?
47	Before manually changing any bucket: a) Where should the bucket be positioned (in relation to the ground) before removing the final pin and b) explain why?
48	Where should the excavator's Operator's Manual be kept and why?

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49	Describe TWO actions to be taken for an open trench at the end of a working day.
50	Why are plant operators generally regarded as 'safety-critical' workers?
51	When parking the machine at the end of the shift, name THREE places where the machine should NOT be parked.
52	If the excavator is carrying out deep excavating work using the full working range, what hazard may occur?
53	a) What is the minimum distance allowed near open trenches when travelling with a loaded front bucket and b) explain why?
54	Before lowering into or moving a pipe into a trench, what trench-related checks must be made?
55	How can a qualification or card benefit a plant operator?
56	If a yellow-coloured marker tape is unearthed during excavating, which TWO types of services could this indicate?
57	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.
58	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?
59	a) What is the purpose of a Method Statement and b) what is required of the operator?
60	When must amber flashing beacons be both fitted and activated?

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61	When travelling, why should the rear boom and extending dipper (if fitted) be locked?
62	Cable avoidance tools (CATs) can detect a variety of buried services. What type of material do they have limitations in locating?
63	What makes up the total (or gross) weight of a load that is to be lifted?
64	If fitted, describe ONE application when the hand throttle can safely be used.
65	If checking the oil level using a dipstick, why must gloves be worn?
66	What is the purpose of a risk assessment?
67	Why should an excavator be re-fuelled at the end of the day?
68	What factors determine the shoring requirements of a trench?
69	a) Name THREE purposes of the raised lugs on tyres and b) what can happen to an excavator if the lugs are severely worn?
70	a) When should 4-wheel drive not be selected and b) explain why?
71	The operator is asked to excavate a new trench. State FIVE different requirements that must be considered or implemented before work commences.

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72	Give THREE reasons why an oversize bucket should not be used when excavating trenches to specification.