



7905-503 MARCH 2018

Level 2 Technical Certificate in Bricklaying

Level 2 Bricklaying – Theory exam

Monday 19 March 2018
09:30 – 11:30

You should have the following for this examination

- a multiple-choice answer sheet
- a pen with black or blue ink
- non-programmable calculator

This question paper is the property of the City and Guilds of London Institute and is to be returned after the examination.

Read the following notes before you answer any questions

- You **must** use a pen with black or blue ink to complete **all** parts of the answer sheet.
- Check that you have the correct answer sheet for the examination.
- Check that your name and candidate details are printed correctly at the top of your answer sheet.
- Inform the invigilator if your name or examination details are not correct.
- Each question shows **four** possible answers (lettered 'a', 'b', 'c' and 'd'); only **one** is correct.
- Decide which **one** is correct and mark your answer on the **answer sheet** with your pen.

For example if you decide 'a' is correct, mark your answer like this

101	<input checked="" type="radio"/>	<input type="radio"/> b	<input type="radio"/> c	<input type="radio"/> d
	Cancel	Cancel	Cancel	Cancel

If you want to change your answer, cancel your first choice by filling in the 'cancel' box below the circle like this

101	<input checked="" type="radio"/>	<input type="radio"/> b	<input type="radio"/> c	<input type="radio"/> d
	Cancel	Cancel	Cancel	

Then mark the answer which you have now decided is correct. For example if you now decide 'c' is correct, mark your answer like this

101	<input checked="" type="radio"/>	<input type="radio"/> b	<input checked="" type="radio"/>	<input type="radio"/> d
	Cancel	Cancel	Cancel	

Any other marks on the form may invalidate some of your answers.

- Any calculations or rough working can be done on the question paper.
- Attempt all questions. If you find a question difficult, leave it and return to it later.

This paper contains 60 questions. Answer them using the 'boxes' numbered 1 to 60 on the answer sheet.

- 1 Which area of work will a building control officer inspect?
 - a Site clearance.
 - b Depth of foundation.
 - c Width of pavement.
 - d Length of face brickwork.

- 2 Which document would support a working drawing to provide a description of the resources to be used on a project?
 - a Specification.
 - b Risk assessment.
 - c Method statement.
 - d Bill of quantities.

- 3 Which abbreviation identifies the organisation that would investigate a major accident on site?
 - a CDM.
 - b HSE.
 - c COSHH.
 - d PUWER.

- 4 What type of security can be used to control access to a construction site?
 - a Trench barriers.
 - b Timber hoardings.
 - c Vehicle barriers.
 - d High viz tape.

- 5 Which elements of work are considered to be the substructure of a building?
 - a Wall ties and lightweight blockwork.
 - b Foundations and cavity fill concrete.
 - c Drainage and face brickwork.
 - d Cavity walling and insulation.

- 6 What does an external cavity wall prevent?
 - a Passage of droppings.
 - b Movement of mortar.
 - c Movement of insulation.
 - d Passage of moisture.

- 7 Which combination of materials would make up a solid floor?
 - a Joists and wall plates.
 - b Hardcore and concrete.
 - c Hardcore and sleeper walls.
 - d Joist and chipboard.

- 8 Which part of a roof structure allows the roof to project past the wall face?
 - a Facia.
 - b Rafter.
 - c Ridge.
 - d Wall plate.

- 9 What activity is classified under second fixing?
 - a Concrete oversite.
 - b Plastered walls.
 - c Ceiling plaster boarding.
 - d Internal door hanging.

- 10 What finish should be applied to the joints of the inside face of the inner leaf prior to fixing insulation batts?
 - a Flush.
 - b Recessed.
 - c Struck and cut.
 - d Weather struck.

- 11 Which construction document details the quality and type of brick to be used on site?
 - a Bill of quantities.
 - b The contract.
 - c Specification.
 - d Schedule.

- 12 Which member of the construction team is responsible for valuations of completed work and communicating that information to sub-contractors?
 - a Quantity surveyor.
 - b Quantity calculator.
 - c Quantity estimator.
 - d Quantity recorder.

- 13 When should building control be first contacted to inspect a building project?
 - a When the work is complete.
 - b Half way through the job.
 - c Prior to the start.
 - d At floor level.

- 14 Which document can the HSE issue to enforce the contractor to stop the work?
 - a Circulation notice.
 - b Delayed notice.
 - c Prohibition notice.
 - d Warning notice.

- 15 What is a purpose of a DPM in a solid floor?
- To provide insulation.
 - To provide strength.
 - To prevent lateral movement.
 - To prevent passage of moisture.
- 16 When laying PVC underground drainage pipe, which material should be used?
- 25 mm aggregate.
 - 10 mm aggregate.
 - Crushed brick.
 - Fine sand.
- 17 Which construction method reduces heat loss the **most** from the walls of a building?
- Dense block external and dense block internal.
 - Dense block external and brick internal.
 - Brick external and lightweight block internal.
 - Brick external and brick internal.
- 18 Which building element covers the fixing of a staircase, spindles and handrails?
- Second fix carpentry.
 - First fix carpentry.
 - Substructure work.
 - First fix services.
- 19 Whilst setting out the walls for a house the client asks you to change the position of the kitchen door, as the bricklayer what actions should be taken?
- Move the door as the client requested.
 - Refer the request to the supervisor.
 - Move door and then inform the supervisor.
 - Refer the request to the building inspector.
- 20 A registered building inspector will carry out inspections during the construction of an extension to a house. There are several stages to the inspection. What are the main points that would be looked at by the inspector, whilst inspecting the substructure?
- Depth, width and thickness of the foundation.
 - Depth of foundation, water service and electricity supply.
 - Water service, gas supply and electricity supply.
 - Depth of foundation, type of blocks and service entries.
- 21 After using chemical to clean staining off a wall. An employee has developed a rash and has been diagnosed with dermatitis. Which health and safety regulations would apply to this condition?
- COSHH, RIDDOR.
 - PUWER, LOLER.
 - RIDDOR, PUWER.
 - LOLER, COSHH.
- 22 What is the **most** effective system to monitor the security of a construction site?
- CCTV camera systems.
 - Security guard dog patrols.
 - Security fencing.
 - Security warning signs.
- 23 Whilst excavating the trenches for an extension to a building a black duct is uncovered. What action should be taken?
- Duct is probably out of use so continue and take no action.
 - Remove the duct and continue with the excavation.
 - CAT scan the duct to determine if it contains any services.
 - Carefully dig around the duct then concrete it in.

- 24 Whilst excavating the ground for an extension to a building, the building control office has said that the ground is of poor loadbearing capacity. What is the **most** likely option to provide a suitable foundation?
- Strip foundations.
 - Pad foundations.
 - Raft foundations.
 - Step foundations.
- 25 When setting out to build a cavity wall for a new build house, where would you find out the required overall width of the cavity wall?
- Working drawing.
 - Bill of quantities.
 - Method statement.
 - The schedule.
- 26 A half brick wall is to be built 1.5 m high, if the gauge of the brick work is to be 4 courses to 300 mm, how many courses high will the wall be?
- 12.
 - 20.
 - 30.
 - 45.
- 27 Which source of information details the amount and type of building resources to be used on a building project?
- Specification.
 - Bill of quantities.
 - Verification notice.
 - Prohibition notice.
- 28 When forming stopped ends to a window opening, how can accuracy be maintained?
- Use a builders square.
 - Use a corner profile.
 - Use a temporary frame.
 - Use a gauge rod.
- 29 What is the smallest cut that could be used on the side of an opening in a stretcher bond wall?
- Quarter batt.
 - Half brick.
 - Queen closer.
 - Three quarter.
- 30 What is the **most** environmentally friendly method of disposing of waste materials on a construction site?
- Burning in skips.
 - Send to landfill.
 - Burying in a trench.
 - Use of segregated skips.
- 31 Which member of the construction team is responsible for providing method statements?
- Sub-contractor.
 - Quantity Surveyor.
 - Building control officer.
 - Health and Safety Executive.
- 32 Calculate the total amount of bricks required to build a half brick thick wall using face bricks, allow for 5% cutting and waste.
- Wall dimensions:
Length = 4.750 m
Height = 1.550 m
- What is the correct answers including the 5% C/W?
- 98.
 - 102.
 - 464.
 - 441.
- 33 Calculate the total volume of concrete required for a strip foundation, if the foundation trench measures 10.500 m in length x 0.450 m wide and 0.300 m deep.
- 7.000 m³.
 - 10.640 m³.
 - 14.170 m³.
 - 1.417 m³.
- 34 Why is the damp proof membrane (DPM) lapped to the damp proof course DPC?
- Prevent passage of moisture from above.
 - Prevent passage of moisture from below.
 - Prevent passage of moisture from the air.
 - Prevent passage of moisture from the outer leaf.

- 35 Which items of equipment would be used to set out and maintain plumb when forming a right angled quoin?
- Tape measure and straight edge.
 - Builders square and spirit level.
 - A gauge rod and spirit level.
 - Straight edge and spirit level.
- 36 When setting out the brickwork bond at ground level, where would a broken bond be positioned?
- Beside the door.
 - Below wallplate.
 - End of the wall.
 - Centre of the wall.
- 37 How can the dust be controlled, when cutting concrete blocks with a mechanical masonry saw?
- Erect barriers.
 - Use of water.
 - Open the window.
 - Close the door.
- 38 An excavation trench for a foundation is to be 2 m deep, what are the **most** likely risks that could be identified on the risk assessment?
- Trench can collapse, working in a confined space, risk of falling materials.
 - Risk of falling materials, Trench can collapse, lack of communication.
 - Electrocution, risk of falling materials, risk of dust.
 - Risk of dust, trench can collapse, electrocution.
- 39 Which source of information should be referred to when sourcing the correct spacing of wall ties?
- The schedules.
 - The bill of quantities.
 - Architect certificates.
 - Building regulations.
- 40 Calculate the number of wall ties required to construct a cavity wall with no opening measuring 250 m² if 1 m² requires 5 wall ties.
- 75.
 - 125.
 - 255.
 - 1250.
- 41 Which method would be used to join a new wall to an existing building?
- Large nails.
 - Vertical DPC.
 - Wall connector.
 - Expanded metal lath.
- 42 How are partial fill cavity wall batts fixed to the inner leaf?
- Nails.
 - Wheels.
 - Staples.
 - Screws.
- 43 What is the **best** method of shielding mineral wool fibre batts in the cavity, from rain during construction?
- Covering with protective sheeting.
 - Covering with blocks.
 - Covering with spot boards.
 - Covering with sheets of polystyrene insulation.
- 44 What is the **minimum** height that a horizontal DPC should be placed above finished ground level?
- 100 mm.
 - 150 mm.
 - 200 mm.
 - 250 mm.
- 45 Which method is **best** used to seal a cavity at a door or window opening?
- A tile batten.
 - Wall tie wheel.
 - Horizontal DPC.
 - PVC closers.
- 46 Why are cavity walls filled with weak mixed concrete below ground level?
- To stop plant growth.
 - To stop water ingress.
 - To prevent the walls compressing.
 - To prevent settlement in the walls.

- 47 Which material can be used to prevent water penetration at lintel height?
- UPVC.
 - Visqueen.
 - DPC Tray.
 - Vertical DPC.
- 48 Why should materials for use in building a cavity wall be kept dry prior to use?
- Stop expansion.
 - Stop shrinkage.
 - Ensure good finish and quality of work.
 - Ensure work is completed to specification.
- 49 Calculate the number of light weight blocks required to build a 100 mm thick wall, 5.600 m long and 1.500 m high, allowing for 10% cutting and waste. What is the correct quantity required?
- 84.
 - 93.
 - 465.
 - 930.
- 50 Calculate the number of packs of insulation required to construct a cavity wall measuring internally 20 m²
Insulation sizes 1.2 m x 0.45 m
Pack size 20
How many packs would be required?
- 1.
 - 2.
 - 3.
 - 4.
- 51 Why is it advisable to tape the joint, when positioning partial fill insulation?
- Stops movement.
 - Prevent ingress of water.
 - Prevent ingress of dust.
 - Ensures wall ties are fixed.
- 52 Which method should be used when fitting partial fill insulation to a cavity wall?
- Bonded.
 - Stacked.
 - Glued.
 - Primed.
- 53 Which sequences is correct, when building a cavity wall using partial fill insulation?
- Build external wall and fix insulation.
 - Build internal wall, fix wall ties, build external wall.
 - Build external wall, fix wall ties, fix insulation, build internal wall.
 - Build internal wall, fix wall ties, fix insulation, build external wall.
- 54 What **must** the bricklayer do prior to fixing insulation batts?
- Remove excess wall ties.
 - Rake out the blockwork joints.
 - Rake out the brickwork joints.
 - Remove excess mortar.
- 55 Why should a cavity wall be closed at eaves level?
- Prevent passage of moisture.
 - Provide bearing for roof trusses.
 - Provide bearing for ceiling joists.
 - Prevent movement of air.
- 56 Which statement **best** describes, the reason, why weep holes are built into trays and over lintols?
- They ventilate the cavity and prevent condensation.
 - They allow access to the cavity to clear debris from the inside.
 - They allow water to clear from the cavity and prevent it building up.
 - They allow water to enter the cavity to clear the trays of any mortar.
- 57 When bricklayers cut and fix a cavity tray above openings, what is the best method of positioning the tray?
- The tray is cut to the same length as the lintel, and sloping from the inner leaf to the outer leaf.
 - The tray is cut to the same length as the lintel, and sloping from the outer leaf to the inner leaf.
 - The tray is cut to the same length as the lintel and fixed level from inside to outside.
 - The tray is cut shorter than the lintel and slopes from the outer leaf to the inner leaf.

- 58 You have been asked to produce a storey rod, to ensure accuracy when building a single storey building. What information would be set out on the rod?
- a Cill height, lintel height, wall plate height.
 - b Lintel height, wall plate height, foundation.
 - c Wall plate height, cill height, DPC.
 - d Cill height, wall plate height, DPM.
- 59 When building the front wall of a house, how can the correct height, line and plumb of the openings be maintained?
- a Build both quoins and follow different gauge at opening reveals.
 - b Build both quoins to gauge and run line through.
 - c Build single quoin and transfer gauge to individual reveals.
 - d Build single quoin, fix dummy frame, and build second quoin.
- 60 What would be the effect if a cavity wall was **not** sealed at its top height?
- a Water could cross the cavity and enter the building.
 - b The insulation value of the cavity would be reduced.
 - c Vermin could access the cavity void.
 - d Condensation could build up in the cavity.

NOW GO BACK AND CHECK YOUR WORK

- **IMPORTANT -**
Are the details at the top of the answer sheet correct?
Have you filled in your answers in INK in the appropriate boxes on the answer sheet?