

Level 3 Advanced Technical Diploma in Bricklaying (7905-30)

March 2018 Version 1.2

Guide to the examination

Document version control

Version and date	Change detail	Section
1.1 March 2018	<ul style="list-style-type: none">• Examination duration updated	Details of the exam
1.2 June 2019	<ul style="list-style-type: none">• Amendment to number of resit opportunities	Details of the exam

Who is this document for?

This document has been produced for centres who offer **City & Guilds Level 3 Advanced Diploma in Bricklaying**. It gives all of the essential details of the qualification's external assessment (exam) arrangements and has been produced to support the preparation of candidates to take the exam/s.

The document comprises four sections:

1. **Details of the exam.** This section gives details of the structure, length and timing of the exam.
2. **Content assessed by the exam.** This section gives a summary of the content that will be covered in each exam and information of how marks are allocated to the content.
3. **Guidance.** This section gives guidance on the language of the exam, the types of questions included and examples of these, and links to further resources to support teaching and exam preparation.
4. **Further information.** This section lists other sources of information about this qualification and City & Guilds Technical Qualifications.

1. Details of the exam

External assessment

City & Guilds Technical qualifications have been developed to meet national policy changes designed to raise the rigour and robustness of vocational qualifications. These changes are being made to ensure our qualifications can meet the needs of employers and Higher Education. One of these changes is for the qualifications to have an increased emphasis on external assessment this is why you will see an external exam in each of our Technical qualifications.

An external assessment is an assessment that is set and/or marked by the awarding organisation (ie externally). All City and Guilds Technical qualifications include an externally set and marked exam. This must be taken at the same time by all candidates who are registered on a particular qualification. We produce an exam timetable each year. This specifies the date and time of the exam so you can plan your delivery, revision and room bookings/PC allocation in plenty of time.

The purpose of this exam is to provide assurance that all candidates achieving the qualification have gained sufficient knowledge and understanding from their programme of study and that they can independently recall and draw their knowledge and understanding together in an integrated way. Whilst this may not be new to you, it is essential that your learners are well prepared and that they have time to revise, reflect and prepare for these exams. We have produced a Teaching, Learning, and Assessment guide that is you should refer to alongside the present document ([Teaching, Learning and Assessment Guide](#)). If a learner does not pass the exam at their first attempt, there is only one opportunity to resit the exam, so preparation is essential.

Exam requirements of this qualification

This qualification has one pathway.

- **Bricklaying** – Theory exam (2 hours and 30 minutes).

The exam is graded and a candidate must achieve at least a Pass grade in order to be awarded the qualification. (In addition to the exam, a synoptic assignment must also be completed and passed. You can find full details of the synoptic assignment in the *Qualification Handbook* and the *Synoptic Assessment Guide* -please see the link to the qualification page at the end of this document).

When does the exam take place?

This qualification involves a one year programme of study. The exam is offered on two fixed dates in March or June. The exact dates will be published at the start of the academic year in the *Assessments and Exam Timetable* <http://www.cityandguilds.com/delivering-our-qualifications/exams-and-admin>.

In order to effectively plan teaching and exam preparation, centres should know when the exam will be taking place and allocate teaching time accordingly. Section 2 of this document gives a summary of the content that needs to be covered in order to prepare learners for the exam and full details of this are given in the *Qualification Handbook*.

Form of exam

The exam for this qualification can be taken either on paper or online.

Can candidates resit the exam?

Candidates who have failed an exam or wish to retake it in an attempt to improve their grade, can do so **twice**. The third and final retake opportunity applies to Level 3 only. The best result will count towards the final qualification. If the candidate fails the exam three times then they will fail the qualification.

How the exam is structured

Each exam has a total of 70 marks available.

Each exam is made up of:

- 10 multiple choice questions
- approximately 10 -12 short answer questions
- 1 extended response question.

Multiple choice and short answer questions are used to confirm **breadth of knowledge and understanding**.

The extended response question is to allow candidates to demonstrate **higher level and integrated understanding** through written discussion, analysis and evaluation. This question also ensures the exam can differentiate between those learners who are 'just able' and those who are higher achieving.

More details about and examples of question types are given in Section 3 of this document.

Assessment Objectives

The exams are based on the following set of assessment objectives (AOs). These are designed to allow the candidate's responses to be assessed across the following three categories of performance:

- **Recollection** of knowledge.
- **Understanding** of concepts, theories and processes.
- **Integrated application** of knowledge and understanding.

In full, the assessment objectives covered by the exam for this qualification are:

Assessment objective	Mark allocation (approx %)
<i>The candidate..</i>	
AO1 Recalls knowledge from across the breadth of the qualification	40%
AO2 Demonstrates understanding of concepts, theories and processes from a range of learning outcomes.	43%
AO4 Applies knowledge, understanding and skills from across the breadth of the qualification in an integrated and holistic way to achieve specified purposes.	17%

Booking and taking the exam

All assessments for City & Guilds Technical Exams must be booked through Walled Garden. There is a deadline for booking exams, synoptic assessments and any other centre marked assessments, please refer to the time line to check these dates.

The exam must be taken under the supervision of an invigilator who is responsible for ensuring that it is conducted under controlled conditions. Full details of the conditions under which the exam must be taken can be found in the Joint Council for Qualifications (JCQ) document, [Instructions for Conducting Examinations \(ICE\)](#).

Special consideration

Candidates who are unable to sit the exam owing to temporary injury, illness or other indisposition at the scheduled time may qualify for special consideration. This is a post-examination adjustment that can, in certain circumstances, be made to a candidate's final grade. The Joint Council for Qualifications' guide to the special consideration process can be found at www.jcq.org.uk.

To make a request for special consideration, please contact: policy@cityandguilds.com

Access arrangements

Access arrangements are arrangements that allow candidates with particular requirements, disabilities or temporary illness to take assessments, where appropriate, using their normal way of working. The Joint Council for Qualifications document, *Access Arrangements and Reasonable Adjustments* gives full details and can be downloaded [here](#).

For further information and to apply for access arrangements please see:

[Access arrangements - When and how applications need to be made to City & Guilds](#)
[Applying for access arrangements on the Walled Garden](#)

2. Content assessed by the exam

Bricklaying

The exam assesses:

- **Unit 301: Principles of organising, planning and pricing construction work**
- **Unit 302: Repair and maintain masonry structures**
- **Unit 305: Constructing fireplaces and chimneys**

Each exam assesses a sample of the content of these units. This means that a single exam will **not** cover 100% of the unit content. The full range of content will be assessed over a number of examination series. Details of the coverage of a particular exam paper will **not** be released in advance of the exam itself. Centres should **not** make assumptions about what will be assessed by a particular exam based on what has been covered on previous occasions. In order to be fully prepared for the exam, learners **must** be ready to answer questions on **any** of the content outlined below.

The table below provides an overview of how the qualification's Learning Outcomes are covered by each exam and the number of **marks** available per Learning Outcome (ie **not** the number of *questions* per Learning Outcome). In preparing candidates for the exam, we recommend that centres take note of the number of marks allocated to Learning Outcomes and to assign teaching and preparation time accordingly.

In preparing candidates for the exam, centres should refer to the Qualification Handbook which gives full details of each Learning Outcome.

The following is a summary of only that qualification content which is assessed by the exam and **not** a summary of the full content of the qualification.

Unit	Learning outcome	Topics	MC Question	Number of marks
301 Principles of organising, planning and pricing construction work.	L01 Understand the way the construction industry is regulated	1.1 Health and Safety regulations 1.2 Planning permission and building control	4	14
	L02 Understand energy efficiency and sustainable materials for construction	2.1 Sustainable development 2.2 Thermally insulated materials 2.3 Construction methods for insulation 2.4 Energy saving measures		

	LO3 Understand how to estimate quantities and price work for construction	3.1 Tendering process 3.2 Estimate quantities of building materials 3.3 Prepare a quote		14
	LO4 Understand how to plan work activities for construction	4.1 Planning construction works 4.2 Risk assessments and method statements		
	LO5 Understand how to communicate effectively in the workplace.	5.1 Written and oral communication		
	LO6 Understand and use drawings and associated software	6.1 Manual drafting 6.2 Computer Aided Design (CAD) 6.3 Building Information Modelling (BIM)		
302 Repair and maintain masonry structures	LO1 Understand materials and defects of masonry structures	1.1: Common materials 1.2: Defects in masonry structures	3	10
	LO2 Repair and renew masonry structures	2.1 Safety checks for tools and equipment 2.2 Temporary support 2.3 Removing and replacing existing materials and components		
305 Constructing fireplaces and chimneys	LO1 Understand resources for fireplace and chimney construction	1.1 Information and regulations 1.2 Resources used in fireplace and chimney construction	3	10
	LO2 Understand how to set out and build fireplaces and chimney stacks	2.1 Process to set out for fireplaces and chimneys 2.2 Process to build fireplaces and chimneys		
Total marks for sections:			10	58 marks

Integration across units*:

12 marks

Total marks for exam:

70 marks

* *Integration across units*. These marks relate to Assessment Objective 4). These marks are awarded to differentiate between levels of performance by candidates taking the exam. The marks are given for how well a candidate has applied their knowledge, understanding and skills from across the units that make up the qualification in an integrated way to meet the requirements of the exam questions.

3. Guidance

Vocabulary of the exam: use of 'command' verbs

The exam questions are written using 'command' verbs. These are used to communicate to the candidate the type of answer required. Candidates should be familiarised with these as part of their exam preparation.

The following guidance has been produced on the main command verbs used in City & Guilds Technicals exams.

A more detailed version of this table, which also includes the command verbs used in the assignments is published in *City & Guilds Technical Qualifications Teaching, Learning and Assessment* guide.

Command verb	Explanation and guidance
Analyse	Study or examine a complex issue, subject, event, etc in detail to explain and interpret, elements, causes, characteristics etc
Calculate	Work out the answer to a problem using mathematical operations
Compare (... and contrast) (or describe the similarities/differences)	Consider and describe the similarities (and differences) between two or more features, systems, ideas, etc
Define	Give the meaning of, technical vocabulary, terms, etc.
Describe	Give a detailed written account of a system, feature, etc (..the effect of...on...) the impact, change that has resulted from a cause, event, etc (..the process..) give the steps, stages, etc
Differentiate between	Establish and relate the characteristic differences between two or more things, concepts, etc
Discuss	Talk/write about a topic in detail, considering the different issues, ideas, opinions related to it
Distinguish between	Recognise and describe the characteristic differences between two things, or make one thing seem different from another
Evaluate	Analyse and describe the success, quality, benefits, value, etc (of an end product, outcome, etc)
Explain	Make (a situation, idea, process, etc) clear or easier to understand by giving details, (..how..) Give the stages or steps, etc in a process, including relationships, connections, etc between these and causes and effects.
Give example(s) illustrate/	Use examples or images to support, clarify or demonstrate, an explanation, argument, theory, etc

Give a rationale	Provide a reason/reasons/basis for actions, decisions, beliefs, etc
Identify	Recognise a feature, usually from a document, image, etc and state what it is
Justify	Give reasons for, make a case for, account for, etc decisions, actions, conclusions, etc, in order to demonstrate why they suitable for or correct or meet the particular circumstances, context
Label	Add names or descriptions, indicating their positions, on an image, drawing, diagram, etc
List	Give as many answers, examples, etc as the question indicates (candidates are not required to write in full sentences)
Name	Give the (technical) name of something
Propose	Present a plan, strategy, etc (for consideration, discussion, acceptance, action, etc).
Select	choose the best, most suitable, etc, by making careful decisions
State	Give the answer, clearly and definitely
Summarise	Give a brief statement of the main points (of something)

Question types

The following explains, and gives examples of, types of questions used in City & Guilds Technical exams. In preparing candidates to take the exam, it is recommended that you familiarise them with the requirements of each question type so that they can be effective and make best use of the time available when sitting the exam.

- An effective candidate will gauge the type and length of response required from the question and the number of marks available (which is given for each question on the exam paper).
- Short answer questions may not require candidates to write in complete sentences. Extended response questions will require a more developed response.
- Candidates should read the exam paper before attempting to answer the questions and should allocate time proportionate to the number of marks available for each question or section.

Question type:	Example question	Mark Scheme:
<p>Multiple Choice questions These are objective questions with a predetermined answer. These consist of a question (or stem) and four options. The candidate should select the correct option (the key). The other 3 options (the distractors) will be plausible but incorrect in some significant respect so that the candidate is required to consider and reject these in order to identify the correct option.</p>	<p>What insulation is most commonly used on a concrete suspended ground floor?</p> <p>a) Sheeps wool. b) Multi-foil roll. c) Fibre glass quilts. d) Polyisocyanurate Sheets.</p>	<p>Correct answer: D</p>
<p>Short answer questions (restricted response) These are questions which require candidates to give a brief and concise written response. The number of marks available will correspond to the number of pieces of information/examples and the length of response required by the question.</p>	<p>Describe how strongboys can be used when forming an opening in a masonry structure. (2 marks)</p>	<p>Mark scheme Strongboys are positioned in a cut out horizontal mortar joint to support the weight of the structure over the proposed opening.</p>

Structured Response Questions

These are questions that have more than one part (eg a), b), etc.). The overall question is made up of linked, short answer questions which move the candidate through the topic in a structured way. For example, the question will usually start with a 'recall'/'state'/'describe' question followed by an 'explain' to draw out understanding of the topic. They usually have a shared introductory 'stem', and the number of marks may increase through the question.

- a) Explain **two** advantages and **one** disadvantages of Computer Aided Design (CAD) programs to traditional manual methods. (3 marks)
- b) Explain why written dimensions should be prioritised over scaled dimensions on a drawing. (2 marks)

Mark scheme

- a) Explanation covering any of the following **two** advantages for **two** marks and **one** disadvantage for **one** mark, maximum **three** marks
- Easier to make alterations to a CAD drawing as opposed to manual methods.
 - CAD drawings are more accurate than traditional drawings.
 - CAD drawings can easily duplicated as opposed to manual methods.
 - Manual drawings do not require computer software as opposed to CAD methods.
- b) Explanation of why written dimension should be prioritised over scaled dimension for **two** marks, **one** mark for each
- Written dimensions always take priority
Paper drawings can shrink or stretch
(1 mark)
 - Scaled drawings can be copied incorrectly which would give a false reading and would give a false size. **(1 mark)**
-

Extended response questions

Extended response questions are those that require the candidate to write a longer written response using sentences and paragraphs. These usually require candidates to discuss, explain, etc. a topic in some detail. The question is often based on a short case study, scenario or other prompt. The level of detail should be gauged from the question and the number of marks available.

Example question

A client has requested that you carry out some decorative alterations to their chimney breast and fireplace in preparation for their installation of a log burner.

They would like you to cut out a corroded metal plate lintel that forms the fire opening and replace it with a brickwork arch that would form a new feature for the opening.

Discuss how to carry out the task.

(12 marks)

Mark scheme

Answer

Indicative content

- Carry out and prepare a risk assessment of the existing chimney breast and surround.
- Prepare a method statement for the task, identifying appropriate stages of safety.
- Prepare suitable tools and equipment for the task, including:
 - hammer
 - chisels
 - angle grinder
 - trowel
 - level
 - strongboy/ props
 - arch centre
 - bricks
 - mortar
 - folding wedges
 - slate

- Equip with PPE
- Remove plaster and expose existing brickwork
- Install a strongboy or suitable supports/ props to take the weight above the opening
- Cut out old metal plate lintel
- Cut out brickwork to receive the new arch
- Determine measurements to establish centre line/ span/ rise
- Prepare/ make a wooden arch template
- Set up arch template with folding wedges
- Set up skewbacks
- Turn brick arch
- Fill in at the top of the arch with slate and make good all joints and surroundings
- Clean up and dispose of all debris in a skip or suitable waste container.

Band 1 (1 – 4 marks)

Response is basic and shows limited understanding of the tasks needed to be carried out.

Does not list sequence of construction, tools, materials and finishes. No discussion of safety implications or removal of waste material.

Misinterpretation of task lacking understanding. In order to access higher marks, sequence of construction, tools, materials and finishes provided with inadequate/unclear details.

Example band 1 response

Mark out the measurements of the opening.

Remove all old bricks.

Build up two pillars to the correct gauge, level and plumb

Set a template, build the arch from both ends then put in the key brick.

Clean workspace

Put folding wedges in to support the arch.

Once it has settled remove the wedges and template.

Band 2 (5 – 8 marks)

Response shows some understanding of the tasks needed to be carried out to. Provides some details of sequence of construction, tools, materials and finishes, but does not make links between them. Basic safety implications and removal of waste material taken into consideration. In order to access higher marks, provides adequate details of the sequence of construction, tools, materials and finishes with some discussion of links between them.

Example band 2 response

I would support the brickwork above the metal plate lintel by using strongboys on acro's. Rake out the joint, place correct distance apart allowing me access and egress to carry out decorative work and preparation for work to begin.

Then I would measure the span, work out the rise to find out whether they want axed or rough arch, using a temporary closed lath dummy frame with wooden wedged to support my arch. Then build to client specification with any arch or decorative panel. I would draw on a piece of plywood the correct cuts on a 1:1 basis to there was no room for error.

Band 3 (9 – 12 marks)

Response shows good understanding of the tasks needed to be carried out.

Evaluates and analyses sequence of construction, tools, materials and finishes by discussing advantages and disadvantages. Adequately discusses links between them. Makes a recommendation but without justification. Shows good understanding of safety implications and methods for removal of waste material. In order to access higher marks, the response will include strong attention to detail through a cohesive and thorough discussion. Response shows clear understanding of the integration of building components. Incorporates and justifies recommendation.

Example band 3 response

I would give the client an estimated quote, discussing all the reason why and how it could change, and make sure it's agreed upon.

Then before any work starts, you need to check that the structure above won't collapse, if you rake the lintel out. Make the correct inspection first.

Then set out the area so that it's easy to clean up at the end. Using across and strongboys, fit them properly so that the structure above is being supported and it won't fall down when work starts. Once all the preparation is done, you can start to remove the lintel, this will most likely require the use of a plugging chisel and hammer. Rake out and remove the points and bricks to remove the lintel.

Remove all appropriate bricks to make room for the new arch that is being built. Get all measurements and make a temporary prop/template that the arch will sit on.

Fit it into place using blocks and wedges in order that is can be removed after the arch is finished.

Now you can start the construction of the arch and join it to the rest of the brick work.

Examination technique

Candidates with a good understanding of the subject being assessed can often lose marks in exams because they lack experience or confidence in exams or awareness of how to maximise the time available to get the most out of the exam. Here is some suggested guidance for areas that could be covered in advance to help learners improve exam performance.

Before the exam

Although candidates cannot plan the answers they will give in advance, exams for Technical qualifications do follow a common structure and format. In advance of taking the exam, candidates should:

- be familiar with the structure of the exam (ie number and type of questions).
- be aware of the amount of time they have in total to complete the exam.
- have a plan, based on the exam start and finish time for how long to spend on each question/section of the exam.
- be aware of how many marks are available for each question, how much they should expect to write for each question and allow most time for those questions which have the most marks available.

At the start of the exam session

At the start of the exam, candidates:

- should carefully read through the exam paper before answering any questions.
- may find it helpful, where possible, to mark or highlight key information such as command words and number of marks available on the question paper.
- identify questions which require an extended written answer and those questions where all or part of the question may be answered by giving bullets, lists etc rather than full sentences.

Answering the questions

Candidates do not have to answer exam questions in any particular order. They may find it helpful to consider, for example:

- tackling first those questions which they find easiest. This should help them get into the 'flow' of the exam and help confidence by building up marks quickly and at the start of the exam.
- tackling the extended answer question at an early stage of the exam to make sure they spend sufficient time on it and do not run out of time at the end of the exam.

Candidates should avoid wasting time by repeating the question either in full or in part in their answer.

Candidates should **always** attempt every question, even questions where they may be less confident about the answer they are giving. Candidates should be discouraged however, from spending too long on any answer they are less sure about and providing answers that are longer and give more detail than should be necessary in the hope of picking up marks. This may mean they have less time to answer questions that they are better prepared to answer.

Extended answer questions

Before writing out in full their answer to extended questions, candidates may find it helpful to identify the key requirements of the question and jot down a brief plan or outline of how they will answer it. This will help clarify their thinking and make sure that they don't get 'bogged down' or provide too much detail for one part of the question at the expense of others.

Towards the end of the exam

Candidates should always set aside time at the end of the exam to read back through and review what they have written in order to make sure this is legible, makes sense and answers the question in full.

If a candidate finds they are running out of time to finish an answer towards the end of the exam, they should attempt to complete the answer in abbreviated or note form. Provided the content is clear and relevant, examiners will consider such answers and award marks where merited.

Further guidance on preparing candidates to take the exam is given in the City & Guilds publication, [Technical Qualifications, Teaching, Learning and Assessment](#) which can be downloaded free of charge from City & Guilds website.

4. Further information

For further information to support delivery and exam preparation for this qualification, centres should see:

City & Guilds

Qualification homepage: <http://www.cityandguilds.com/qualifications-and-apprenticeships/construction/construction/7906-carpentry-joinery> which includes:

- *Qualification handbook*
- *Synoptic assignment*
- *Sample assessments*

Technical Qualifications, Resources and Support: cityandguilds.com/techbac/technical-qualifications/resources-and-support

Joint Council for Qualifications

Instructions for Conducting Examinations: www.jcq.org.uk/exams-office/ice---instructions-for-conducting-examinations