



7906-503 MARCH 2022 Level 3 Advanced Technical Diploma in Architectural Joinery (450)

Level 3 Architectural Joinery – Theory exam (1)

If provided, stick your candidate barcode label here.							Monday 21 March 2022 13:30 – 16:00																	
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- If additional answer sheets are used, enter the additional number of pages in this box.
- **O**
- Before taking the examination, **all candidates** must check that their barcode label is in the appropriate box. Incorrectly placed barcodes may cause delays in the marking process.
- Please ensure that you staple additional answer sheets to the **back** of this answer booklet, clearly labelling these with your full name, enrolment number, centre number and qualification number in BLOCK CAPITALS.
- All candidates need to use a **black/blue** pen. **Do not** use a pencil or gel pen, unless otherwise instructed.
- If provided with source documents, these documents **will not** be returned to City & Guilds, and will be shredded. Do not write on the source documents.
- *I declare that I had no prior knowledge of the questions in this examination and that I will not divulge to any person any information about the questions.

You should have the following for this examination

- a pen with blue or black ink
- a non-programmable calculator

General instructions

- This examination contains 25 questions. Answer all questions.
- **Section A** consists of **10** multiple-choice questions, each carrying 1 mark.
 - \circ Indicate your response (a, b, c and d) in the space provided.
- Section B consists of 15 structured/short answer questions.
 - Answer the questions in the space provided.
 - The maximum marks for **each** question are shown in brackets.
- Cross through any work you do not want to be marked.

Section A

c)

1	Which document provides details about the measured rates of building materials required for a construction project?	õ
	a) Specification.	

Response:		

b) Bill of quantities.

Programme chart. d) Critical path analysis.

2	Calculate the quantity of bricks required to construct a one brick thick wall in English
	bond when the wall is 3.9 m long and 0.9 m high. Assume 120 bricks per m ² .

210 a) b) 211 421 C) d) 422 Response: ___

Which item of information is required in addition to labour, materials and overheads, 3 when preparing a quote for building work?

- a) Profit.
- b) Land cost.
- c) Travelling time.
- d) Capital gains tax.

Response:	

- When is a permit to work required?
 - a) When using wood machinery.
 - b) When working with hired plant.
 - c) When working in confined spaces.
 - d) When using cartridge operated fixings.

Response:

- 5 Which document contains a trouble shooting page that can be consulted should a breakdown occur with a portable power tool?
 - a) Manufacturers' catalogue.
 - b) Assembly instructions.
 - c) Maintenance record.
 - d) User's manual.

Response:	

6		In a 123-matrix type risk assessment, which score indicates that a major injury is very likely?								
	a) b) c) d)	0 3 6 9								
	Res	ponse:								
7	Wha	at is used to sharpen a morticer chisel auger bit?								
	a) b) c) d)	Triangular file. Conical stone. Round file. Slip stone.								
	Res	ponse:								
8	What is used to facilitate multiple lengths of timber being cut at the same length, when using a cross-cut saw?									
	a) b) c) d)	Hinged stop. Depth stop. Pinch stick. Push stick.								
	Res	ponse:								
9	Whi	ch machine has a split infeed roller?								
	a) b) c) d)	Fixed bed rip saw. Spindle moulder. Thicknesser. Morticer.								
	Res	ponse:								
10	Wha	at is the name given to the cutting edge on the wings of a mortice chisel auger?								
	a) b) c) d)	Tip. Spur. Tooth. Lance.								

Response: _____

Section B

11	State what is meant by the term 'Permitted Development'.	(3 marks)
		_
		_
		_
12	State the two main types of tender.	(2 marks)
		_
13	List four documents used to communicate information in the process of	
.0	manufacturing joinery.	(4 marks)
		_

14	An operative has been asked to manufacture twelve oak fully glazed doors, 1981 mm tall x 762 mm wide. The stiles and top rails will come out of 100 mm x 50 mm sawn materials. The bottom rails will come out of 225 mm x 50 mm sawn material.
	Calculate the volume of timber required for the glazed doors, allowing 10% for waste

Show all your working out.	(6 marks)

5

16

17

18

State two saw tooth types that are suitable when cross-cutting timber on a dimension saw.	(2 marks)
State two adjustments that are required following a circular saw blade being changed, to ensure safe use.	(2 marks)
State three operations that can be carried out on a surface planer.	(3 marks)

15 Explain the benefits of using a CAD program when setting out joinery work.

19	Identify the two operations that can be carried out on a thicknessing machine using a jig.	(2 marks
20	When morticing long lengths of timber, state two design features required for a roller support stand used to hold up the end of the component.	(2 marks
21	Describe the purpose of the Approved Code of Practice (ACOP) for the safe use of woodworking machinery.	(2 marks
22	Summarise three actions that need to be taken when a fault on a machine has been identified.	(3 marks

machine?	(5 m
How is a circular rip saw set up to cut lengths of glue blocking?	(6 m
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(12 marks)

Your employer is considering setting up a new machine shop primarily for the production of bespoke architectural joinery products. The company has a budget of £7500 to purchase reconditioned machinery.

The following machines are available for the costs as shown below

•	Cross-cut	£750
•	Re-saw	£5000
•	Rip-saw	£1000
•	Dimension saw	£3000
•	Wall saw	£2500
•	Narrow band saw	£500
•	Spindle moulder	£1000
•	Surface planer	£750
•	Thicknesser	£750
•	Combination planer	£1250
•	Four-sided planer	£5000
•	Hollow chisel morticer	£300

You have been tasked to recommend machines required for the workshop.

Discuss what machinery would be purchased to enable the manufacture of bespoke architectural joinery products, justifying your choices.				

