7906-503 MARCH 2018
Level 3 Advanced Technical Diploma in Architectural Joinery (450)
Level 3 Architectural Joinery – Theory exam

Thursday 22 March 2018
09:30 – 12:00

Candidate name (first, last)
First
Last
Candidate enrolment number
Date of birth (DDMMYYYY)
Gender (M/F)
Assessment date (DDMMYYYY)
Centre number
Candidate signature and declaration*

• If any additional answer sheets are used, enter the additional number of pages in this box.
• Please ensure that you staple additional answer sheets to the back of this answer booklet, clearly labelling them 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.
• 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 assessment and that I will not divulge to any person any information about the questions.

You should have the following for this examination
• non-programmable calculator
• a pen with blue or black ink

General instructions
This question paper is the property of City and Guilds of London and should be returned after the examination.
• The examination contains 22 questions. Answer all questions.
• Section A – consists of 10 multiple choice questions, each carrying 1 mark.
  • Indicate your response (a, b, c or d) in the space provided.
• Section B – consists of 12 structured/short answer questions.
  • Answer the questions in the space provided.
  • The marks for each question are shown in brackets.
Section A

1 Which regulation requires the HSE to be notified if an operative is off work for seven days due to an accident?

a) CDM.
b) LOLER.
c) COSHH.
d) RIDDOR.

Response: ______________________

2 Using the data supplied in Figure 1, calculate the volume of timber required for the following glazed door (do not make any allowances for waste).

Data:
Top rail and sides Ex 150 x 50
Bottom rail Ex 250 x 50

Figure 1

a) 0.0473 m³
b) 0.0500 m³
c) 0.0495 m³
d) 0.4950 m³

Response: ______________________
3 What type of casement window, does the symbol shown in Figure 2 represent?

![Figure 2](image)

a) Tilt and turn.
b) Top opening.
c) Side opening.
d) Vertical sliding.

Response: ______________________

4 What term describes a collaborative integrated approach to building design?

a) Building Simulation.
b) Computer Aided-Design.
c) Sustainable Development.
d) Building Information Modelling.

Response: ______________________

5 After thicknessing the underside of the timber is showing a repeat pattern of bruising marks, what is the most likely cause?

a) Feed speed too fast.
b) Feed speed too slow.
c) The imprint from serrated friction roller.
d) The imprint from a contaminated friction roller.

Response: ______________________

6 Which machine is used where manufactured boards need to be cut accurately and to fine tolerances?

a) Ripsaw.
b) Wall saw.
c) Bandsaw.
d) Crosscut saw.

Response: ______________________
7 Which machine has a thrust wheel and guide assembly?
   a) Ripsaw.
   b) Bandsaw.
   c) Thicknesser.
   d) Surface planer.

Response: _______________________

8 At what level should additional outfeed roller support be set, when carrying out facing and edging operations on a surface planer?
   a) Level with the infeed table.
   b) Just below the infeed table.
   c) Level with the outfeed table.
   d) Just above the outfeed table.

Response: _______________________

9 Bruising marks are showing on the underside of timber being brought to thickness. What is the remedy for this?
   a) Reducing the feed speed.
   b) Reducing the depth of cut.
   c) Cleaning the pressure bar.
   d) Cleaning the anti-friction rollers.

Response: _______________________

10 What is the cause of a hollow square morticing chisel turning blue?
   a) The auger is bent in its length.
   b) The motor speed is set too fast.
   c) The incorrect setting of the chip breakers.
   d) The chisel has not been set square to the fence.

Response: _______________________
Section B

11 State three methods of reducing the energy use in a building. (3 marks)

12 a) State the difference between a quote and an estimate. (2 marks)

b) Calculate the cost of the following timber using the data provided. (6 marks)

Data
16 boards at 2000 mm long, 225 mm wide and 63 mm thick.
The price of the timber is £450/m³

13 Identify three cost when preparing a quote for a building project. (3 marks)
14 Explain why CAD is the preferred method for producing drawing. (7 marks)

15 State
a) the maximum gap allowed between the back of the saw blade and the riving knife at table level (1 mark)

b) the decibel level that hearing protection must be worn when using machinery (1 mark)

c) the maximum duration allowed for a saw blade to come to a halt when switched off (1 mark)

d) the minimum distance allowed from the centre of spindle to the back of the outfeed suppose table. (1 mark)
16 State the term given to
   a) sawing timber through its thinnest dimension (1 mark)
   
   b) sawing timber through its thickest section. (1 mark)

17 State the minimum
   a) distance from the end of a cut and push stick must be used (1 mark)
   
   b) length of push stick allowed. (1 mark)

18 State three additional operations that can be performed on a ripsaw bench other than those given in question 16. (3 marks)

19 Describe the machining process of producing two components using a ripsaw. (6 marks)
20 Explain the relationship between the saw blade diameter and the peripheral speed, when the saw blade is less than the **minimum** diameter allowed.  

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21 Describe the process of how 600 mm wide raised and fielded panels are machined and jointed up.  

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22 A small joinery company has been asked to quote for a batch run of 50 ash, six panelled doors. Discuss the considerations and production planning requirements for the doors prior to quoting for this work. (12 marks)
Question 22 continued

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