CARIBBEAN EXAMINATIONS COUNCIL

CARIBBEAN SECONDARY EDUCATION CERTIFICATE® EXAMINATION

18 MAY 2022 (a.m.)

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FILL IN ALL THE INFORMATION REQUESTED CLEARLY IN CAPITAL LETTERS.

TEST CODE | 0 | 1 | 3 | 7 | 4 | 0 | 2 | 0 |

SUBJECT INDUSTRIAL TECHNOLOGY
OPTION C – BUILDING AND FURNITURE TECHNOLOGY – Paper 02

PROFICIENCY TECHNICAL

REGISTRATION NUMBER | | | | | | | | | | |

SCHOOL/CENTRE NUMBER					

NAME OF SCHOOL/CENTRE

CANDIDATE'S FULL NAME (FIRST, MIDDLE, LAST)

DATE OF BIRTH | D | D | M | M | Y | Y | Y | Y |

SIGNATURE

DO NOT WRITE ON THIS PAGE



FORM TP 2022086

TEST CODE **01374020**

MAY/JUNE 2022

CARIBBEAN EXAMINATIONS COUNCIL

CARIBBEAN SECONDARY EDUCATION CERTIFICATE® EXAMINATION

INDUSTRIAL TECHNOLOGY

OPTION C – BUILDING AND FURNITURE TECHNOLOGY

Paper 02 – Technical Proficiency

2 hours 10 minutes

READ THE FOLLOWING INSTRUCTIONS CAREFULLY.

1. This paper consists of FIVE compulsory questions.
2. Use sketches where necessary to support your answers.
3. Write your answers in the spaces provided in this booklet.
4. Do NOT write in the margins.
5. You may use a silent, non-programmable calculator to answer questions.
6. This paper contains metric dimensions only. You should work your answers in the metric system.
7. If you need to rewrite any answer and there is not enough space to do so on the original page, you must use the extra lined page(s) provided at the back of this booklet. **Remember to draw a line through your original answer.**
8. **If you use the extra page(s), you MUST write the question number clearly in the box provided at the top of the extra page(s) and, where relevant, include the question part beside the answer.**

DO NOT TURN THIS PAGE UNTIL YOU ARE TOLD TO DO SO.

(i) Atmosphere

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(ii) Ecosystem

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(4 marks)

(b) Identify TWO **negative** effects of climate change on water resources.

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(2 marks)

(c) Outline TWO uses for EACH of the following construction documents.

(i) Bill of quantities

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(ii) Architectural/floor plan

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(iii) Survey/site location plan

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(6 marks)

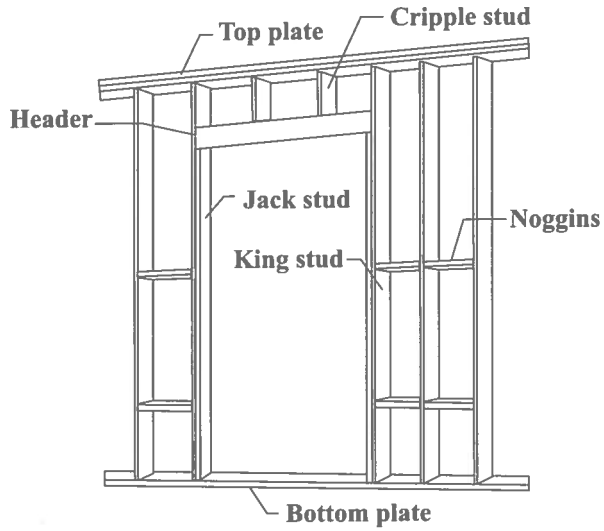


Figure 1. Timber partition frame

Outline SIX steps for constructing the timber partition frame of the residential building in Figure 1.

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(6 marks)

Total 18 marks

2. (a) State THREE purposes of hoarding.

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(3 marks)

(b) List THREE construction personnel.

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(3 marks)



Figure 2. Open construction site

(i) Suggest SIX measures that could be implemented to ensure the health and safety of individuals on the construction site shown in Figure 2.

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(6 marks)

GO ON TO THE NEXT PAGE

(ii) Outline the **first** SIX steps for squaring the building foundation in Figure 2 using the 3:4:5 method.

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(6 marks)

Total 18 marks

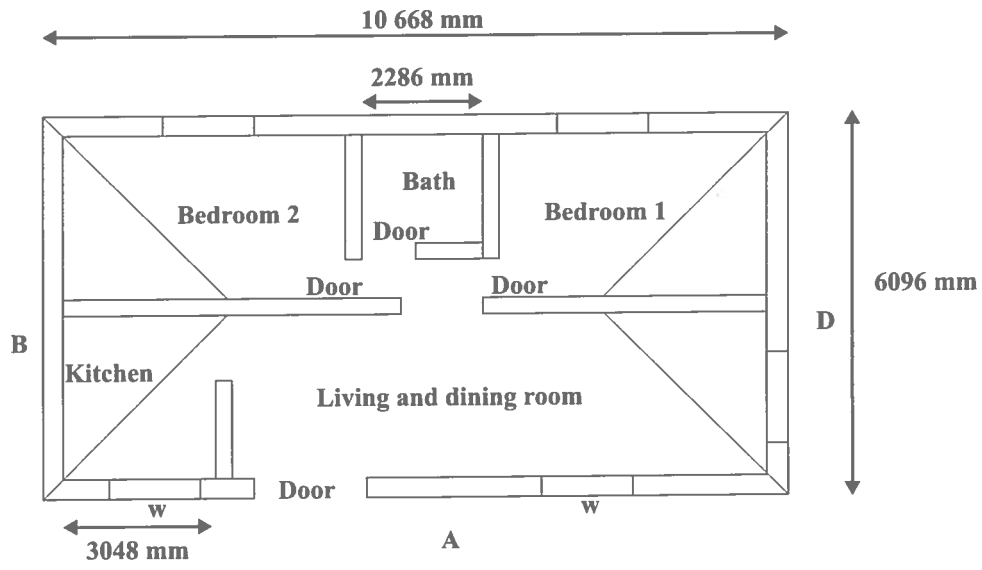


Figure 3. Wooden building

(a) Sketch a single line diagram of the front elevation of the building labelled A in Figure 3 to show ONE door and TWO window openings.

(4 marks)

(b) (i) Identify the type of roof shown in Figure 3.

.....

(1 mark)

(ii) List FIVE members of the framing in the roof outline shown in Figure 3.

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(5 marks)

(c) Use single line sketches to illustrate the symbol for EACH of the following on a floor plan.

(i) Door

(ii) Window

(2 marks)

(i) Bedroom 1

(ii) Living and dining room

(4 marks)

(e) Figure 4 shows a blank paper 216 mm × 279 mm (letter size). The drawing area is within a 10 mm border of the paper.

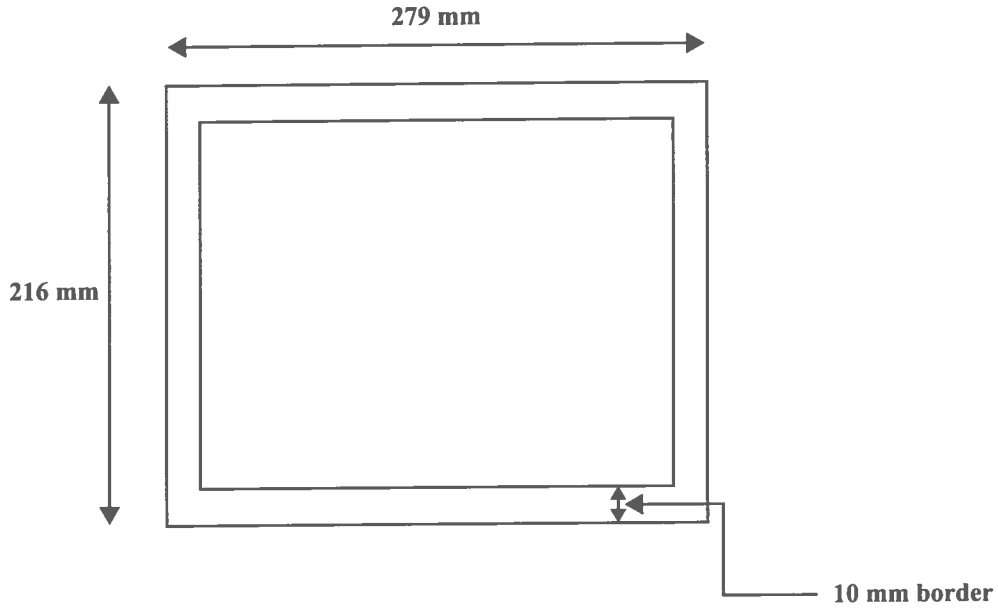


Figure 4. Blank paper for scale drawing

Identify a suitable scale to represent the building in Figure 3 **on page 10** and which also maximizes the use of the drawing paper in Figure 4.

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(2 marks)

Total 18 marks

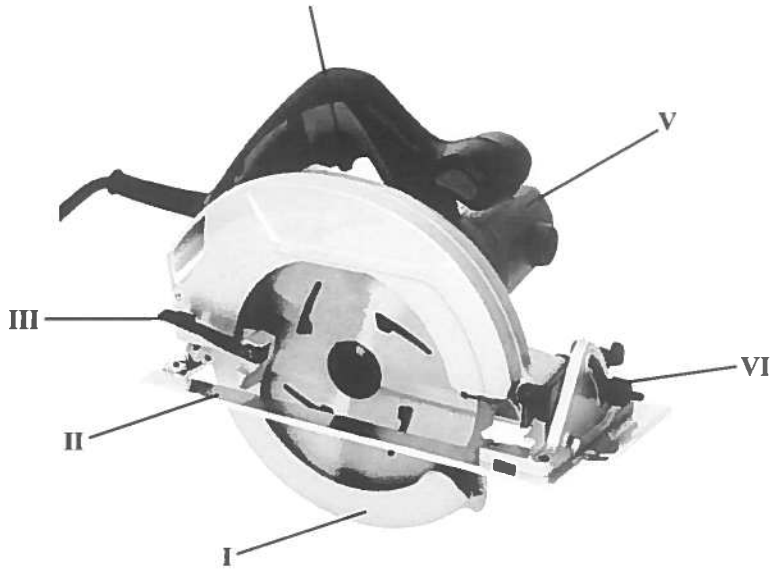


Figure 5. Circular saw

(a) Identify the SIX numbered parts of the circular saw shown in Figure 5.

I .....

II .....

III .....

IV .....

V .....

VI .....

(6 marks)

(b) Briefly explain the correct way to position your hands when operating the circular saw during EACH of the following processes, to reduce the risk of getting injured.

(i) At the start of the cut

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(ii) Halfway through the cut

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(iii) Completing the cut

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(6 marks)

(c) Outline the first SIX steps in using the circular saw to produce a piece of cedar measuring 25 mm × 152 mm × 1524 mm long from a larger piece measuring 25 mm × 304 mm × 1524 mm long.

(6 marks)

Total 18 marks

beam on a masonry building.

Item/Aggregate	Fraction/Portion
_____	_____
_____	_____
_____	_____
Concrete mixture	$\frac{7}{7}$

(6 marks)

(ii) State TWO methods of curing concrete.

.....

.....

.....

(2 marks)

(iii) State ONE method of testing a concrete mixture.

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(1 mark)

(b) Explain the function of ONE of the materials that would be used in a batch of mortar.

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(3 marks)

GO ON TO THE NEXT PAGE

(c) (i) Outline in sequence the steps for mixing concrete manually.

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(4 marks)

(ii) Name the tools required for each step outlined in (c) (i).

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(2 marks)

Total 18 marks

END OF TEST

IF YOU FINISH BEFORE TIME IS CALLED, CHECK YOUR WORK ON THIS TEST.

If you use this extra page, you MUST write the question number clearly in the box provided.

Question No. [ ]

DO NOT
WRITE ON
THIS PAGE

1. **Fill in all the information requested clearly in capital letters.**

TEST CODE: | 0 | 1 | 3 | 7 | 4 | 0 | 2 | 0 |

SUBJECT: INDUSTRIAL TECHNOLOGY
OPTION C – BUILDING AND FURNITURE TECHNOLOGY – Paper 02

PROFICIENCY: TECHNICAL

REGISTRATION NUMBER: | | | | | | | | | | |

FULL NAME: _____

(BLOCK LETTERS)

Signature: _____

Date: _____

2. **Ensure that this slip is detached by the Supervisor or Invigilator and given to you when you hand in this booklet.**

3. **Keep it in a safe place until you have received your results.**

INSTRUCTION TO SUPERVISOR/INVIGILATOR:

Sign the declaration below, detach this slip and hand it to the candidate as his/her receipt for this booklet collected by you.

I hereby acknowledge receipt of the candidate's booklet for the examination stated above.

Signature: _____
Supervisor/Invigilator

Date: _____