

SIR ARTHUR LEWIS COMMUNITY COLLEGE
ENGINEERING AND THE CIRCULAR ECONOMY
ACADEMIC YEAR (2024/2025) - SEMESTER ONE
END OF SEMESTER EXAMINATION

TUTOR (S) : Mr. Nathan Hyacinth

PROGRAMME TITLE : Carpentry and Joinery - Foundations

COURSE TITLE : Carpentry and Joinery Technology II

COURSE CODE : CAJ104

LEVEL : Certificate / Year One

DATE : Tuesday, 10th December 2024

COMMENCEMENT TIME : 1:00 p.m.

DURATION : 2 hours

INVIGILATOR (S) : A. Serieux-Prospere, Y. Guerra-Contino,
W. Munn

ROOM (S) : UWI-0R-01

GENERAL INFORMATION AND INSTRUCTIONS

- **This paper consists of three sections. Sections A, B and C.**
- **Section A** consists of Ten (10) true or false questions. Each question is worth one (1) mark.
- **Section B** consists of Fifteen (15) Multiple Choice Questions. Each question is worth one (1) mark.
- **Section C** consists of Three (3) Short Answer Questions. Each question is worth Twenty- Five (25) marks.
- Students must sign IN and OUT on the examination class list.
- Students must **not** write their names on their answer sheets, only their **ID number**.
- Students are reminded to read **all** questions and instructions in each section very carefully.
- **Note: Bags, Books as well as writing paper not given by the invigilator should be deposited at the front of the examination room or as otherwise indicated.**
- **All cell phones must be turned off during the exam.**

DO NOT TURN THIS COVER SHEET UNTIL
YOU ARE TOLD TO DO SO!!!

SECTION A

INSTRUCTIONS: Write the letter **T** or **F** next to the MOST appropriate response for each question. **You are required to answer the questions in this section on the question paper.**

1. _____ Students can operate woodworking machines without training and safety guards in place, during the presence of an instructor.
2. _____ A transom serves the function of dividing the casement window into smaller sections.
3. _____ Goggles should **only** be worn whilst using a power saw, to prevent from dust entering your eyes.
4. _____ A safe way to operate a table saw is to have another student, pull the overhanging end of the plank out of the machine, when the cut is almost complete.
5. _____ Hardwood trees are distinguished easily by their broad leaves.
6. _____ The crown of a tree is that part which commercial timber is harvested from.
7. _____ Pivot windows are hinged at the center of the window sash.
8. _____ Hardboard is a common type of man-made board.
9. _____ The reduction of sound from exterior sources is a function of a window.
10. _____ Admitting light into a room is the primary function of an external door.

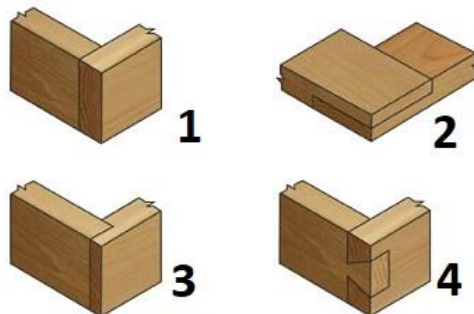
(TOTAL 10 MARKS)

SECTION B

INSTRUCTIONS: Shade the letter next to the MOST appropriate response for each question. **You are required to answer the questions in this section on the question paper.**

1. Hardwoods come from broad leaf trees that are commonly termed _____
 - A) Conifers
 - B) Deciduous
 - C) Oaks
 - D) Evergreen
2. Which of the following is an example of a common softwood tree?
 - A) Maple
 - B) Walnut
 - C) Mahogany
 - D) Pine
3. The outer layer or skin that gives protection to the trunk of a tree is called the _____.
 - A) Sap
 - B) Cambium
 - C) Bark
 - D) Bast
4. A standard size of a sheet of plywood is;
 - A) 4' x 8'
 - B) 4' x 6'
 - C) 5' x 8'
 - D) 5' x 10'

5. The joint in diagram 4 is a _____ joint.
 A) rebated butt
 B) dovetail
 C) butt
 D) half lap



6. This type of joint is mostly used in the construction of picture frames.
 A) Miter
 B) Mortise and tenon
 C) Groove
 D) Half-lap

7. When hardwood logs are cut so that the annual rings form an angle greater than 45 degrees with the surface of the board, the lumber conversion is called;
 A) Tangent sawn
 B) Quarter-sawn
 C) Flat sawn
 D) Slash sawn



8. Allowing timber to dry under normal weather conditions by stacking under a shed is referred to as _____ seasoning;
 A) Kiln
 B) Rapid
 C) Air
 D) Case

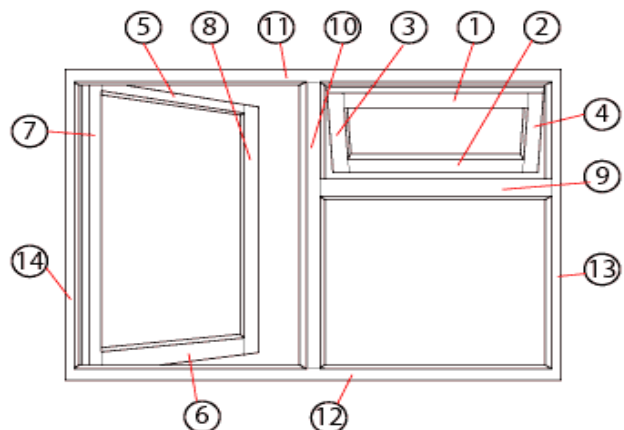
9. Which of the following is not a type of interior door?
 A) Flush
 B) Panel
 C) Bi-fold
 D) Timber cladding

10. You should wear safety glasses in the workshop;
 A) When working with sharp tools
 B) When you feel like wearing them
 C) At all times
 D) When using a power tool

11. This color code indicates that equipment is nonfunctional or currently under repair.
 A) Yellow
 B) Blue
 C) Orange
 D) Purple

12. How many sheets of plywood are required to cover a wall 8 feet tall by 16 feet long?
 A) 8 sheets.
 B) 4 sheets.
 C) 6 sheets.
 D) 3 sheets.

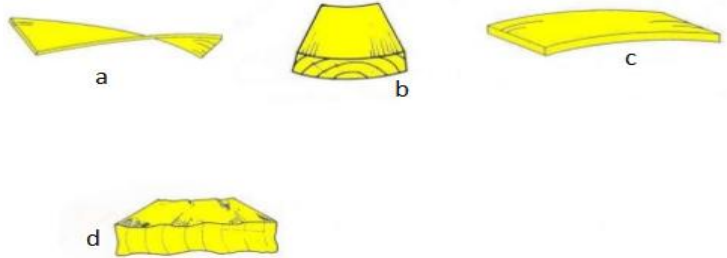
13. The member labeled '12' in the window frame below is called a;
 A) Mullion
 B) Head
 C) Sill
 D) Transom



14. The function of anti-capillary grooves are to
- A) prevent any form of excess water from creeping into the building.
 - B) prevent water from entering at the top of the window.
 - C) throw rain water clear of the opening light below.
 - D) prevent the inclusion of rain water.

15. The timber defect shown in diagram 'a' is referred to as;

- A) Cupping
- B) Bow
- C) Shake
- D) Twist



(TOTAL 15 MARKS)

SECTION C

INSTRUCTIONS: You are required to answer **all** questions using the answer sheet provided.

QUESTION 1

- A) List four (4) general safety practices that should be observed with regards to the use of power tools in a workshop and a construction site. (4 marks)
- B) Identify four (4) colour codes that are used to denote safety on a site or workshop and state what each colour signify. (8 marks)
- C) Briefly describe one method of seasoning timber. (7 marks)
- D) Name two joints found under the following groups (6 marks)
 - i. Lengthening joints
 - ii. Widening joints
 - iii. Framing joints

(TOTAL 25 MARKS)

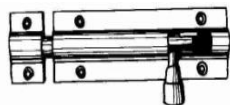
QUESTION 2

- A) Name **three** (3) different types of doors and use vertical sketches to illustrate each. (9 marks)
- B) Produce a sketch of a **six** panel door and identify **six** main door parts. (10marks)
- C) State the difference between a door frame and a door lining. (2 marks)
- D) Name the ironmongery shown below that is used to hang and secure doors. (4 marks)

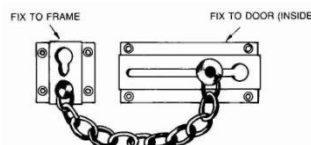
i.



ii.



iii.



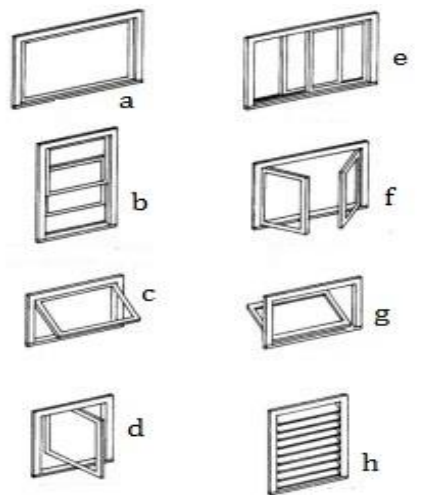
iv.



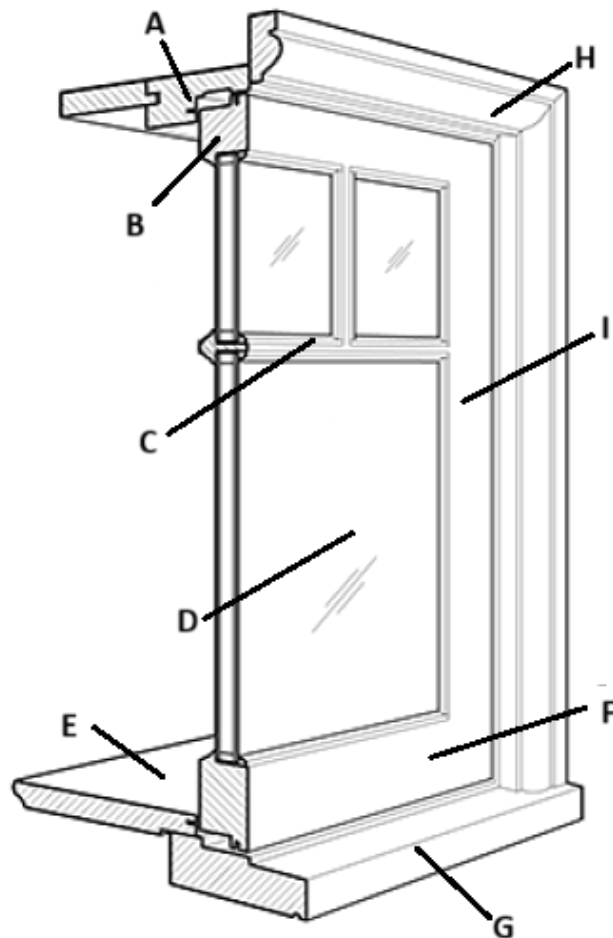
(TOTAL 25 MARKS)

QUESTION 3

- A) State [i]the primary function and [ii] two secondary functions of a window. (3 marks)
- B) Identify any four [4] various types of windows from the diagram chart shown. (8 marks)



- C) The illustrating below shows a vertical section through a traditional casement window and frame displaying the arrangement of members. Identify the names of letter members [A, B, C, D, F, G, I] (7 marks)



- D) List four [4] types of ironmongery or hardware that can be used for hanging and also provide security for various types of windows. (8 marks)

(TOTAL 25 MARKS)

END OF EXAMINATION