THE UNITED REPUBLIC OF TANZANIA
NATIONAL EXAMINATIONS COUNCIL
CERTIFICATE OF SECONDARY EDUCATION EXAMINATION

074

CARPENTRY AND JOINERY
(For Both School and Private Candidates)

Time: 3 Hours *Thursday*, **October 27, 2005 a.m.**

Instructions

1. This paper consists of sections A, B and C.
2. Answer **all** questions in sections A and B and **two (2)** questions from section C.
3. Electronic calculators are not allowed in the examination room.
4. Cellular phones are not allowed in the examination room.
5. Write your **Examination Number** on every page of your answer booklet(s).

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SECTION A (20 marks)

Answer **all** questions in this section.

1. For each of the items (i) - (x), choose the correct answer from among the given alternatives and write its letter beside the item number.

(i) When preparing timber for use, the first side to be planed is the

A end side
B edge side
C face side
D face edge
E corner side.

(ii) Safety is a combination of knowledge, skill and awareness to prevent

A injury to a person.
B damage to workshop equipment and materials
C injury to a person and danger or damage to materials
D low income in production
E damp and unventilated working place.

(iii) Temporary braces are usually introduced on a new door frame for the following reason

A to be removed when the shutter is fixed
B ledge left to be part of a door frame
C to be replaced by introduced ledge
D to maintain the tested square
E to control the height and width.

(iv) A plane cutter is fitted in a grinding wheel for sharpening when it

A has been used for a long period
B has been left too long unused.
C has got rust
D has been planed across pieces of metals
E is new.

(v) The flap hinges are made to be fitted

A externally and internally
B externally only
C in windows only
D in doors only
E internally only.

(vi) Modern handsaws have brakes fitted to one or both wheels to

A balance the saw which is always in high speed
B start the machine
C switch off the power
D increase momentum of she machine
E stop the saw in an emergency or after use.

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(vii) In partition constructions a stud joins the head by a _____ joint.

A half check
B mortice and tenon
C cross halving
D bareface
E rebate

(viii) A shore member provided to support highest areas is called

A racker
B rider
C straining piece
D strut
E wedge.

(ix) Carpentry is an art of

A dealing with cutting, fitting and assembling wood or related materials in construction of buildings
B construction of bridges
C science in buildings
D repairing wooden objects
E manufacturing wooden furnitures

(x) The last member to be striked off in a lintel formwork is the

A standard
B cheeks
C racker
D props
E strips

CPR

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2. Match the responses in **List B** with the phrases in **List A** by writing the letter of the correct response beside the item number.

LIST A

(i) A process of slightly bending of teeth at their tips to give clearance in the kerf

(ii) Wood work designing principles

(iii) Conices

(iv) Type of glue made from hide and skins and bones of animals

(v) A double roof without tiles

(vi) Bees wax

(vii) Manufactured boards

(viii) The rounded edge of a wooden stair

(ix) Made from crushed glass into small particles and coated on the appropriate paper or cloth.

(x) The toughest tree known all over the world.

LIST B

A. Toe board

B. Setting

C. Scaffolds

D. The most recently discovered polish

E. Timber movement consideration

F. A moulding for covering junctions between ceiling and the walls

G. Architrave

H. Resin glue

I. Removal of wedges

J. Couple roof

K. A joint formed by the common rafter at the wall plate

L. A type of finish obtained from living creatures

M. Topping

N. Hardboard, chipboard, laminboard and plywood

O. Chamfer

P. Joints

Q. Nosing

R. Mpingo

S. Glass paper

T. Floor brands

U. Mahogany

SECTION B (40 marks)

Answer all questions in this section.

3. (a) State the two (2) types of screw drivers.

(b) Why are twin mortice and tenon joints used in construction?

4. (a) List down **three** (3) reasons why timber is seasoned?

(b) State a type of plane used for producing convex surfaces.

5. (a) Define the term "Door"

(b) State **three** (3) functions of a door.

6. (a) What is a formwork?

(b) Write **four** (4) types of formworks.

CPS

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7. (a) Analyse two (2) types of portable sanding machines.

(b) List down two (2) means of bending or setting the teeth of a saw.

8. (a) What does the term scaffold mean?

(b) State three (3) requirements of scaffolds.

9. (a) Analyse the factors determining the strength of glues.

(b) Explain the term sanding.

10. (a) What does the term stairs mean?

(b) Define the term flight.

(c) What is the maximum height of headroom in stairs?

11. (a) Write four (4) basic requirements of windows.

(b) With specific examples, state two (2) methods used in window openings.

12. (a) Explain the three (3) primary functions of a roof.

(b) Name two (2) major classes of roofs.

SECTION C

Answer two (2) questions from this section.

13. (a) What does the term "centring" mean?

(b) Define the following as applied in centring:

(i) Springing line.

(ii) Soffit.

(c) (i) What kind of hinge is used to a door that opens inwards and outwards?

(ii) With the aid of a neat diagram, draw a door that opens by a revolving method.

(d) (i) List down two (2) types of door frames.

(ii) Sketch a cross-section of a casing door frame and show the architrave.

(iii) What is a vestibule?

(e) (i) What is the relationship between the haunch depth and the tenon width?

(ii) Sketch a diagram showing the last operation of joining wood using a slot screws joint.

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14. Produce a sketch of a straight flight stair and hence illustrate the following members

(i) Rise
(ii) Going
(iii) Handrail
(iv) Nosing
(v) Baluster
(vi) Newel post
(vii) String
(viii) Scotia mould
(ix) Tread.

15. (a) Define the term "dry rot"
(b) Name six (6) measures used in preventing dry rot.
(c) State the two (2) types of internal fittings.

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