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 ***Friday afternoon 26/10/2007***

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).

S45 This paper consists of 6 printed pages.

Find more free educational resources at:
http://maktaba.tetea.org

SECTION A (20 marks)

Answer **all** questions in this section.

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

(i) The cut formed by a saw is called
A fillet B kerf C architrave D river E cornice.

(ii) Casein glue is manufactured from
A animal hoofs
B plant products
C artificial manufactured products
D cow skimmed milk
E combination of animal hoofs and plant products.

(iii) An instrument used to measure moisture content in kiln plants is called
A barometer
B photometer
C electric moisture meter
D speed meter
E gallometer.

(iv) An architrave is
A fixed between walls and ceilings
B fixed at the foot of the wall
C fixed to cover the joint between door frames, window casings and plaster around them
D fixed between muntin and panels
E fixed between finishing floor level and wall.

(v) The suitable hinge for hanging match boarded doors is
A the butt hinge
B the back flap hinge
C the tee hinge
D the strap hinge
E the raised hinge.

(vi) Texture, figure and grain signify
A the appearance of a cut surface of timber structure
B the arrangement of the grain
C sawn timber
D finger tests of a cut timber
E age of trees.

Find more free educational resources at:
http://maktaba.tetea.org

(vii) A bay window with 45° or 60° return angle is the
A square bay
B patent bay
C arched bay
D cant bay
E elliptical bay.

(viii) Why must the trimming timbers of a floor be sound, straight-grained and free from large knots?
A To maintain its appearance and attraction.
B To maintain its strength since it is load bearing timbers.
C To maintain its non-load bearing.
D Because they are usually soft woods.
E Because they are produced from very long pieces of timber.

(ix) To cut the corner joints of a picture frame use
A a try square
B sliding bevel
C mitre square
D T-square
E set square.

(x) The following is the window lighting for a flat roof.
A Dormer roof light.
B Sky lights.
C Lantern lights.
D Patent glazing.
E Casement.

Find more free educational resources at:
http://maktaba.tetea.org

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

List A	List B
(i) Scarf joint, dovetail joint and tongued and grooved joint	A Easing
(ii) An operation of lowering a centre	B Mahogany
(iii) A door for sheds	C Classes of joints used in woodworks
(iv) Decorative mould around doors and windows to emphasize and decorate opening	D Bridle joint
(v) Longitudinal curvature flat wise from end to end of a piece of timber	E A reciprocating cross cut saw
(vi) It has a tapered side to set up a strong bursting pressure against resistance	F Panel door
(vii) Refers to one of the factors used in calculating the percentage of moisture content of timber	G Dry weight
(viii) They are cone-bearing trees with needle like leaves whose seeds are produced naked	H Skirting
(ix) It is used for preparing edge to edge joints for gluing	I Match boarded door
(x) A machine for cutting logs into reasonable lengths	J Twisting
	K Trying plane
	L Honey comb
	M Architrave
	N Barometer
	O Conifers
	P Jack plane
	Q Wedge
	R Band saw
	S Bowing
	T Floor boards

SECTION B (40 marks)

Answer **all** questions in this section.

3. Name **four (4)** types of marking gauges.

4. List **four (4)** wood boring insects.

5. (a) Write down the formula for calculating the pitch and rise of a roof.

   (b) Briefly explain the following terminologies as used in the field of carpentry and joinery.

   (i) Run

   (ii) Pike

Find more free educational resources at:
http://maktaba.tetea.org

6. Analyse **four (4)** areas to be observed when considering safety precautions.

7. (a) State **three (3)** important reasons for timbering to trenches.

   (b) Give the name of a bottom part of formwork.

8. Derive the formula for calculating the moisture content of timber and then determine the dry weight of a sample if the wet weight was found to be 40 grammes and moisture content is 50 %.

9. Define the following terms:

   (a) Paint

   (b) Varnish.

10. Differentiate a stair from staircase.

11. (a) List **four (4)** warping forms of timber.

    (b) Differentiate straining beam from tie beam.

12. (a) Name **two (2)** types of timber partitions.

    (b) Mention **two (2)** methods used in timber conversion.

SECTION C (40 marks)

Answer **two (2)** questions from this section.

13. (a) (i) Describe the saying "safety first", as applied to carpentry and joinery.

    (ii) List **six (6)** workshop safety habits.

    (iii) Analyse **two (2)** classes of safety on handtools.

    (iv) Mention **three (3)** possible sources of accidents when using machines and portable power tools.

    (b) Briefly explain the following:

    (i) Pitch of a roof

    (ii) Dragon tie

    (iii) Hip face

    (iv) Fascia board.

Find more free educational resources at:
http://maktaba.tetea.org

14. (a) Define the term "floor".

(b) Classify timber floors.

(c) Explain the term "strutting" as used in timber floor construction.

(d) Sketch a timber floor pattern and illustrate the following:

(i) Floor boards
(ii) Floor joists
(iii) Girder
(iv) Binder
(v) Concrete base

15. (a) Define the term "window".

(b) Sketch a window frame and label the following parts:

(i) Head
(ii) Jamb
(iii) Transom
(iv) Mullion
(v) Fanlight.

(c) Enumerate **three (3)** methods used in hanging window shutters.

(d) Distinguish between dormer window from bay window.

Find more free educational resources at:
http://maktaba.tetea.org