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, 22nd October 2009 p.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) The term "ease the centre" means
- A adjusting the centre
- B constructing the centre
- C lower and remove the centre
- D set and up the centre to position
- E make formwork for an arch.

(ii) The joint commonly used for flooring and panelling work is called
- A side joint
- B shouldered joint
- C framing joint
- D dovetail joint
- E tenon joint.

(iii) The following is not a type of wood finishes
- A Natural finishes
- B Stressed finishes
- C Paint finishes
- D Stained finishes
- E Dry finishes.

(iv) _____ glue is unworkable if used in damp conditions.
- A Soya beans
- B Animal
- C Contact
- D Casein
- E Mahogan

(v) The process of refilling the soil to the trench after removing the timbering structure is known as
- A ramming
- B back filling
- C dewatering
- D striking
- E bowling

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(vi) The _____ is the half dimension of the span of a roof.

A span
B pitch
C run
D ran
E birds mouth.

(vii) The _____ is the horizontal intermediate member supporting the rafters.

A battens
B purlin
C collar
D wall plate
E strut.

(viii) The oval brand head nail has the following quality in carpentry and joinery work.

A It is hot dip galvanised to prevent rusting.
B It has quality to make fine work.
C It is coated with a resinous cement, which during driving into timber it melts the compound and increases the holding power of the nail.
D It provides improvement in the strength of nail joints due to its rings.
E It has a less tendency to split the timber.

(ix) The following member is fixed on the wooden stair only for decorative purposes:

A Wood block
B Baluster
C Scotia mould
D Wedge
E Tread

(x) The oil applied inside the formwork before the concrete is poured

A helps in strengthening concrete
B smoothens the concrete
C helps fast removal of timber formwork after work
D helps curing
E reduces cracking of concrete.

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

List A	List B
(i) Vertical member dividing the doorframe into two.	A Steel string.
(ii) A possible danger when working on machines.	B Reinforced concrete, steel, stone and timber.
(iii) These are main load bearing members of a roof.	C Purlin.
(iv) They can be used on span over 4500 cm to give a lower floor area free of internal walls.	D Herring-bone strutting.
(v) Is a type of nail recommended for fixing the plasterboard.	E Double floors.
(vi) Is among the reinforcements used in timber upper floor construction.	F Up and over door.
(vii) It consists of bridging joists spanning between walls or partitions and bearing usually on wall plates or other members to distribute the load.	G Jamb
(viii) Intermediate support to rafter suitably spaced between eaves and ridges.	H Timber, reinforced concrete, plastic and glass.
(ix) Newel	I Mullion.
(x) Are the common materials adopted in stair construction.	J Single floor in timber.
	K Common rafter.
	L Galvanized nail.
	M Its function is to support the inclined handrail at each end.
	N Loose long sleeves.
	O Balustrade.
	P Stile.
	Q Flight.
	R Herringbone.
	S Muntin.
	T Horn.

SECTION B (40 Marks)

Answer all questions in this section.

3. What type of hinges are best for built- in or drive- in gates and garage doors?

4. List down four (4) functional requirements of a door when closed.

5. Give four (4) manufactured boards used in woodworking in the building industry.

6. (a) What is an architrave?

   (b) Explain the chief function of finishes material.

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7. State **four (4)** basic requirements of a scaffold.

8. (a) Define the term "mullion".

   (b) List down the vertical components used in supporting trenches in loose soils.

9. (a) What kind of joints are most suitable for the construction of table drawers?

   (b) Indicate the common area where a franked joint is commonly applied.

10. Define the term "timber partition."

11. Name four (4) types of arches.

12. Mention three (3) types of adhesives used in bonding of laminated plastic.

SECTION C (40 Marks)

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

13. (a) What does the term preservative mean?

    (b) List three (3) qualities of preservatives.

    (c) Mention four (4) advantages of water-soluble preservatives.

    (d) List four (4) methods used to apply preservatives.

14. (a) Draw a neat and well labelled sketch for a sectional view of a formwork showing details of beam casing.

    (b) (i) What type of a nail is used for fencing?

    (ii) Name the vertical members on stud timber partition.

    (iii) State three (3) operations that can be performed on a radial arm saw machine.

    (c) Give the definition of the following terms:

    (i) Laggings

    (ii) Ribs

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15. (a) Categorize three (3) types of arches as applied in carpentry and joinery.
(b) With the aid of sketches, define and describe fully the types of flush doors.

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