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, 12th November 2015 a.m.**

Instructions

1. This paper consists of section A, B and C.
2. Answer **all** questions in section A and B and **two (2)** questions from section C.
3. Calculators and Cellular phones are **not** allowed in the examination room.
4. 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 among the given alternatives and write its letter beside the item number in the answer booklet provided.

(i) The following are the factors that govern the type of timbering required for a particular excavation **except**

A the depth of the trench
B the nature of the ghound
C trial pits exploration
D the presence of ground water
E vibrations due to traffic.

(ii) The process of removing a centre from its position is known as

A easing
B polling
C shaping
D striking
E timbering.

(iii) The purpose of using mould oil on formwork is to

A clean the formwork
B stop the concrete adhering
C help the concrete set
D clean unwanted particles
E stop the formwork rotting

(iv) A large opening for a shop front is to be made in the front wall of a structurally sound building. To provide support to the structure during the alteration work, it is necessary to

A block off the opening
B create a flying shore
C create a hoarding
D erect a vertical shore
E strike the inner wall.

(v) When erecting stud partition the following operations are carried out.

1. House out and fix head plate.
2. Cut and fix the wall studs.
3. Cut and fix intermediate studs and noggins.
4. Plumb down from the head plate and fix the soleplate.

The correct sequence is

A 1, 2, 4, 3
B 1, 4, 2, 3
C 2, 1, 3, 4
D 3, 4, 2, 1
E 4, 3, 1, 2.

(vi) When constructing a panelled door we normally leave 50 mm horn on each end of the style because it

A enables the frame to be fixed in the wall
B enables the joint to fit in its position
C prevent splitting of the joint
D provides support to panel and glazing
E receives the panel or glazing

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(vii) Glazed doors are constructed when

A enough air is needed
B more light is required
C security is of less important
D there is an intermediate support
E the opening is too wide.

(viii) When making a window frame the operation to be carried out directly after planning the timber should be

A chopping mortises
B making a rebate
C marking out the timber
D preparing rod
E ripping sides of the tenons

(ix) What is the total going of a flight?

A Vertical distance between first and last riser
B Total thickness of a flight
C Horizontal distance between first and last riser
D Inclined distance of a flight
E Total length of carriage piece.

(x) A good time for felling timber trees ready for conversion is

A during harvesting period
B during summer
C at the end of summer
D at mid of summer
E at winter.

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

	List A		List B
(i)	A piece of timber nailed to the bottom member at the ends of the trussing system to spread out the load.	A	Blocking
(ii)	Diagonal members of the wall frame used to stiffen and strengthen the wall.	B	Brace
(iii)	Members that form the bottom of a window opening.	C	Cripple stud
(iv)	Short pieces of lumber installed to maintain the regular spacing of the upright members.	D	Jack studs
(v)	Short upright members that line the sides of an opening	E	Kicker
(vi)	Short members above and below an opening.	F	Laggings
(vii)	The bottom horizontal member of the wall frame.	G	Noggings
(viii)	Top horizontal member of the exterior wall frame that support the second floor joist.	H	Plates
(ix)	The top horizontal member of a wall frame.	I	Puncheons
(x)	The vertical member of the wall frame.	J	Rail
		K	Ribbons
		L	Rough sill
		M	Shoe
		N	Stile
		O	Studs

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SECTION B (40 Marks)

Answer **all** questions in this section.

3. The spindle moulder is one of the most dangerous machines in woodworking. State four safety measures that you need to take when using the machine.

4. (a) List the common shapes of files used in woodwork and state the main use of each.

   (b) What is the function of wheel brace?

5. (a) Briefly, explain two simple precautions that should be observed in order to prevent dry rot.

   (b) Briefly describe two causes of warping in timber.

6. (a) Differentiate between latch bolt and dead latch.

   (b) Briefly explain how the spring latch operates.

7. With the aid of a sketch, show the difference between stopped trench and through trench.

8. Briefly describe four preparations which are necessary for gluing timber.

9. Describe any four specifications that should be mentioned when ordering screws.

10. (a) (i) Briefly explain the components parts of a 'fully glazed' door.
    (ii) Name two methods of fixing the glass panes in a fully glazed door.

    (b) By giving two examples, explain the circumstances where a revolving door is preferred to hinge door.

11. State four reasons of staining timber.

12. What are the chief points to consider in the erection of any system of shoring?

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SECTION C (40 Marks)

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

13. (a) (i) What is a skylight window?
(ii) Draw a diagram of a skylight window and label its parts. **(06 marks)**

(b) Give any two common sizes of windows and explain their uses in residential building. **(03 marks)**

(c) With the aid of a neat sketch, describe the construction of a stairwell opening on upper timber floor **(11 marks)**

14. (a) Enumerate the main procedure of fitting a mortise lock. **(06 marks)**

(b) Draw an L shaped roof framing plan and label its parts. **(08 marks)**

(c) State the steps that can be involved in the construction of an L shaped roof around the valley. **(06 marks)**

15. (a) Explain the following components of scaffolding.
(i) Ledgers
(ii) Bearers
(iii) Bridles
(iv) Poles. **(04 marks)**

(b) Outline any five important things to look for, during the inspection process of scaffolding. **(05 marks)**

(c) With the aid of a neat diagram, describe a mason's scaffold, label its parts and explain its suitability. **(08 marks)**

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