

Candidate's Examination Number

**THE UNITED REPUBLIC OF TANZANIA
NATIONAL EXAMINATIONS COUNCIL
FORM TWO SECONDARY EDUCATION EXAMINATION**

0034

AGRICULTURAL SCIENCE

Time: 2 Hours

Monday, 01st December 2014 p.m.

Instructions

1. This paper consists of **ten (10)** questions in sections A and B.
2. Answer **all** questions.
3. **All** answers must be written in the spaces provided.
4. **All** communication devices are **not** allowed in the examination room.
5. **All** writing must be in black or blue ink.
6. Write your **Examination Number** at the top right corner of every page.

| FOR EXAMINERS' USE ONLY | | |
|-------------------------|-------|---------------------|
| QUESTION NUMBER | SCORE | EXAMINERS' INITIALS |
| 1 | | |
| 2 | | |
| 3 | | |
| 4 | | |
| 5 | | |
| 6 | | |
| 7 | | |
| 8 | | |
| 9 | | |
| 10 | | |
| TOTAL | | |

SECTION A (30 Marks)

1. For each of the item (i) – (x), choose the correct answer from among the given alternatives and write its letter in the box provided.

(i) Cutting, threading and fitting of pipes is known as

- A soldering
- B plumbing
- C forging
- D welding.

(ii) All of the following are draught animals **except**

- A Oxen
- B Donkey
- C Camel
- D Giraffe.

(iii) Which one of the following is a forest crop grown in Tanzania?

- A Tea
- B Pyrethrum
- C Timber
- D Cocoa.

(iv) The joining of a small piece of shoot to a shoot containing root system with good characteristics is referred to as

- A grafting
- B layering
- C budding
- D cutting.

(v) Which compartment in a ruminant stomach is considered to be a true stomach?

- A Rumen.
- B Reticulum.
- C Abomasum.
- D Omasum.

(vi) The feed nutrient essential as structural constituents of the animal body are

- A Carbohydrates.
- B Proteins.
- C Vitamins.
- D Mineral salts.

(vii) One of the factors that cause change in demand of an agricultural good is

- A Changes in income of consumers
- B Changes in the costs of production
- C Occurrence of pests and diseases
- D Changes in weather condition.

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(viii) The factor of production that enables effective utilization of other factors is

- A land
- B capital
- C entrepreneurship
- D labour.

(ix) Which one of the following is **not** true about soil?

- A It is the weathered part of the earth's crust.
- B It is the upper layer of the earth's crust.
- C Contains five percent water.
- D Contains plant and animal remains.

(x) Which one of the following soil properties is **not** influenced by the soil structure?

- A Aeration.
- B Water movement.
- C Colour.
- D Porosity.

2. Match the items in **List A** with those in **List B** by writing the letter of the correct answer below the corresponding item number in the table provided.

| LIST A | | LIST B | |
|--------|------------------------------|--------|---------------|
| (i) | Cereal crop ^A | A | Lucerne |
| (ii) | Oil crop ^B | B | Pigeon pea |
| (iii) | Beverage crop ^C | C | Pawpaw |
| (iv) | Legume crop ^D | D | Sugarcane |
| (v) | Root crop ^E | E | Paddy |
| (vi) | Fruit crop ^F | F | Bourganvillia |
| (vii) | Medicinal crop ^G | G | Tea |
| (viii) | Spice crop ^H | H | Cyprus |
| (ix) | Forage crop ^I | I | Pyrethrum |
| (x) | Ornamental crop ^J | J | Okra |
| | | K | Sunflower |
| | | L | Rubber |
| | | M | Ginger |
| | | N | Cabbage |
| | | O | Cassava |

ANSWERS

| LIST A | (i) | (ii) | (iii) | (iv) | (v) | (vi) | (vii) | (viii) | (ix) | (x) |
|--------|-----|------|-------|------|-----|------|-------|--------|------|-----|
| LIST B | E | L | C | D | O | G | I | M | A | F |

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3. For each of the following statements, write **TRUE** for a correct statement or **FALSE** for a statement that is not correct.
- (i) Agriculture can be regarded as a science as it involves application of human skills which can be manipulated.....**F**
 - (ii) In scientific investigation procedures, acceptance or rejection of the hypothesis is done in data analysis.....**T**
 - (iii) Tenon saw is used for cutting wood grains in many directions.....**T**
 - (iv) Intercropping is the growing of two or more crops on the same piece of land at random.....**F**
 - (v) The system of rearing poultry in which sawdust is spread on the floor of the house where birds are kept is known as deep litter system.....**T**
 - (vi) 'B horizons' in a soil profile are characterized by accumulation of materials.....**F**
 - (vii) Inelastic supply occurs when the quantity of goods supplied changes by a smaller percentage than the price.....**F**
 - (viii) Silage is a livestock fodder which is stored while it is still in a green moist state.....**T**
 - (ix) Herbicides are chemicals used to kill weeds.....**F**
 - (x) Soil structure is the relative proportions of soil particles of different diameters in the soil.....**T**

SECTION B (70 Marks)

4. (a) Give the name of the pipe fitting that is used for each of the following purposes in plumbing:
- (i) Branching off the main pipeline.....
 - (ii) Changing direction of run of a pipe.....
 - (iii) Connecting pipes in a straight line.....
 - (iv) Connecting two fittings.....
 - (v) Connecting two pieces of pipes where either one can be turned or where part of a system will have to be removed for repair or replacement.....
- (b) State the function of each of the following tools used in woodwork.
- (i) Cross-cut saw.....

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(ii) Jack plane.....

(iii) Chisel.....

(iv) Hammer.....

(v) Brace.....

5. (a) Define the term 'crop pest'.....

(b) (i) Outline two advantages and four disadvantages of chemical method in controlling pests.
Advantages:

Disadvantages:

(ii) Give four suitable properties for the chemical to be used to control pests.

6. (a) Differentiate between natural and artificial brooding.

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(b) Briefly explain four problems of the free range system in rearing poultry.

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7. (a) Define the following terms:

(i) Nomadic pastoralism.....

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(ii) Shifting cultivation.....

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(b) Outline six disadvantages of nomadic pastoralism.

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8. (a) (i) What is a factor of production?

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(ii) Briefly describe three characteristics of land as a factor of production..

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(b) (i) Who is an entrepreneur?

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(ii) Give five roles of entrepreneurship as a factor of production.

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9. (a) (i) Define the term 'soil profile'.

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(ii) Mention four horizons found in a soil profile and state their characteristics.

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(b) (i) Name the three solid particles of the soil.

Sandy soil
Loamy soil
Clayey soil

(ii) State two functions of living organisms in the soil.

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10. (a) Briefly explain the function of each of the following garden tools.

(i) Wheelbarrow

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(ii) Sprinkler

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(iii) Hose pipe

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(iv) Garden shear

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(v) Secateur.....

(b) Name the garden tool responsible for each of the following function.

(i) Watering seedlings in nursery beds and transplanted seedlings.....

(ii) Preparing planting furrows and holes.....

(iii) Removing underground perennial weeds.....

(iv) Collecting together uprooted olant roots and stems.....

(v) Clearing the land of small trees and shrubs before cultivation.....