**NAME…………………………………….**

**Admission number: ……………**

**Class: ………………………………….**

**agriculture**

443/1

TERM 1 2014

**MWAKICAN JOINT EXAM TEAM (MJET)**

PAPER 1

2 HOURS

**INSTRUCTIONS TO CANDIDATES**

1. Write your name and index number at the top of the space given
2. This paper has three sections
3. Answers all question in section A and B and any 2 from section C
4. Answer your questions in the spaces provided.

Section a (30mk) answer all questions

1. What do you understand by Agriculture economics? (1mk)
2. State four reasons for carrying out minimum tillage (2mk)
3. State the conditions under which opportunity cost is zero in a farming enterprise (1mk)
4. Outline 4 limitations of pastoral farming (2mk)
5. Give two factors that would determine the depth and width of a cut off drain (1mk)
6. State three ways in which Agriculture relate to industries (1mk)
7. Differentiate between soil texture and soil structure (1mk)
8. Give four advantages of title deed to a farmer (2mk)
9. Name the chemical used to achieve the following during water treatment process
10. Coagulation of solid particles (1/2mk)
11. Softening of water (1/2 my)
12. Killing pathogens (1/2mk)
13. Give four reasons why green manure is not commonly used in agricultural production (2mk)
14. State two effects of soil PH on crop production (1mk)
15. (a)Name 4 properties of soil influencing soil texture (2mk)

(b) Name two factors affecting rooting of cutting. (1mk)

1. Give four reasons for timely planting of annual crops (2mk)
2. Why is it advisable to apply straight nitrogenous fertilizers to a crop of maize at height of 30-45 cm (1mk?)
3. Give 4 a disadvantages of non-capped multiple stem system in coffee production (2mk)
4. Differentiate between thinning and rogueing (1mk)
5. State 2 importance’s of tissue culture in crop production (1mk)
6. Define the following terms as used in maize breeding. (1mk)
7. Hybrid
8. composite
9. Distinguish between integrated pest management and economic injury level. (1mk)
10. Give three advantages of using pesticides in pest control (11/2)
11. State how each of the following leads to loss of soil fertility
12. Monocropping (1/2mk)
13. Leaching (1/2mk)

**SECTION B (20MK)( answer all questioning the space provided)**

1. The diagram below shows a method of irrigation.
2. Identify the irrigation method shown above
3. What are the dis advantages of the method named in (a) above when using underground perforated pipes (3mk)
4. A farmer was advised to apply 300kg CAN per hectare during top dressing of maize crop .If CAN contains 21% Nitrogen calculate the amount of Nitrogen applied per ha (2mk)
5. The diagrams below show methods of layering.

A

B

1. Identify the methods A and B (2mk)
2. What is the advantage of method **B** over method **A** (1mk?)
3. Name other two methods of layering apart from the ones shown above (1mk)
4. Study the diagram below showing a method of soil sampling and answer the questions that follow.

1 2 4

10 3 5

6 7

9 8

1. Name the method of soil sampling illustrated above (1mk)
2. State precaution taken when collecting the soil for testing using the named method (2mk)
3. Give two reasons why soil from the farm is tested (2mk)
4. Below is a diagram of weed. Study the diagram carefully and answer the questions that follow.
5. Identify the weed illustrated above (1/2mk)
6. Why is the weed illustrated above difficult to control (1mk?)
7. State two ways in which the weed can be controlled in a field of maize (2mk)
8. Below are diagrams showing tea cutting planted in polythene sleeves.
9. Which of the two diagrams shows a correct planted cutting (1/2mk?)
10. Give reasons for your answer in (a) above (1mk)

**SECTION C 40 MK. ANSWER ANY TWO**

1. (a)Explain the negative effects of land fragmentation and sub-division in Kenya (9mk)

(b)Describe the factors that determine spacing of crops during planting (7mk)

(c)Discuss various symptoms of viral infection in crops (4mk)

1. (a)Discuss the factors that encourage soil erosion (10mk)

(b)Discuss the importance of drainage as land reclamation methods (5mk)

(c)Explain five cultural methods of crop diseases control (5mk)

1. Describe the field production of Napier grass and Elephant grass (*Penniseum purpuveum*) under the following sub –headings
2. Seed bed preparation (5mk)
3. Planting (5mk)
4. Fertilizer application (4mk)
5. Weed control (4mk)
6. Utilization (2mk)

THE END