AGRICULTURE, FORM 1, END TERM 2- 2019
TIME: 1HR 45MIN
NAME……ADM……CLASS……
INSTRUCTION: Answer ALL the questions

1. Give two reasons why Agriculture is looked as a science. (2mks)

   It entails scientific studies such as;

   - **Crop pathology**
   - **Entomology**
   - **Genetics**
   - **Agricultural engineering**
   - **Soil science**

2. a) What are the advantages of organic farming? (2mks)
   - **it does not pollute the air – environment friendly.**
   - **It does not destroy the soil micro organisms**
   - **Organic matter improves soil structure**
   - **Organic farming uses organic manure which replenish soil nutrient, enhances soil water infiltration and relention**
   - **Organic manure provides food for soil microbes.**

   b) What is mixed farming? (1mk)

-It is the growing of crops and rearing of animals on the same farm

3. a)Give four reasons why Agriculture considered important in Kenya's economy. (4mks)
   - **Provides food**
   - **Source of employment**
   - **Provision of foreign exchange**
   - **Source of raw materials for industries**
   - **Provision of market for industrial goods**
   - **Sources of money of capital**

   b)What is plantation farming. (1mk)
   - Growing crops in large tracks of land in a highly specialized and mechanized manner or
   - Growing of crop in a large scale usually characterized by the production of one crop

4. State two effect of HIV/AIDS on agriculture. (1mk)
   - **Shortage of farm labour due to sickness**
   - **Money spent on caring for the sick instead of purchasing Agro- products**
   - **Lack of motivation to do farming**
   - **NGO, government spend money to control HIV instead of financing agricultural activities**

5. a) State the difference between soil structure and texture. (2mks)
   soil structure – refers to the physical appearance of the soil according to the way the individual soil particles are arranged packed or aggregated.
   Or
   The overall arrangement or grouping of soil particles
   Soil texture – refers to the relative proportions of the various sizes of mineral particles in a sample of soil.
6. a) What is soil profile? (2mks)

it's the vertical arrangement of various soil layers or horizons

b) Describe the components of a well developed soil profile. (5mks)

i) Superficial layer – consisting of dry decaying and decayed organic matter.
ii) Topsoil – Uppermost soil layer, with high humus (Horizons A) contented, well aerated and decomposed organic matter.
iii) Sub – soil (Horizon B) – its is more compact and less aerated
iv) Substratum / weathered rock (horizons c) – made up of partly weathered rock with no humus
v) parent rock (horizons D) – refers to as the bedrock

7. Place the following tools in their respective categories and state their uses. (10mks)
   a) Panga – **Graden tool – used for cutting, slashing, weeding etc**
   b) Shovel - **Garden tool – used for liftinf soil and manure**
   c) Pick axe – **Garden tool – for removing roots, large stones and breaking heavy soils. Used for digging hard soil.**
   d) Garden line - **garden tool – used for measuring between one plant and the next**
   e) Wheelbarrow - **Garden tool – transporting loads which are too heavy**
   f) Sprayer – **Garden tool – Used for spraying chemicals solutions**
   g) Ripsaw – **Cutting tool – cutting along the grain of wood**
   h) Tape measure – **measuring tools – used for measuring length**
   i) Scraper – **Measuring tools – used for measuring lengths**
   j) Marking gauge- **Smoothing tool – used on final stages of smoothing surfaces and on small pieces of work.**
8. a) State the reasons for preparing land before planting. (4mks)

i) **To kill weeds**
ii) **To incorporate manure and other organic matter into the soil**
iii) **To destroy different stages of crop pests such as eggs, larvae, pupae or adult by burying them, exposing them to the heat of the sun and predators and starving them**
iv) **To aerate the soil**
v) **To encourage the penetration of roots in the soil**

vi) **To make subsequent operations possible**

vii) **To encourage water infiltration into the soil**

b) What is a seedbed? (1mk)

Land prepared for planting

9. Give reasons why the burning of Bushes as a methods of land cleaning should be discouraged. (2mks)

i) A lot of organic matter is destroyed

ii) Soil micro – organisms are destroyed

iii) **Planting nutrient are destropyed**

10. What is ridging? (1mk)

Process of digging is destroyed

Soil micro- organisms are destroyed

Plant nutrient are destroyed

b) Give reasons why the following operations are carried out in crop production;

i) Rolling. (1mk) – **done to prevent small seeds from being carried a way by wind and to prevent soil erosion**

ii) Levelling. (1mk) – **To promote easy germination of small seed crops**

11. State the main sources of water on the farm. (3mks)

- **Surface – rivers , stream and dams lakes**
- **Underground – springs well boreholes**
- **Rain water**

b) State the methods of water collection and storage in the farm. (3mks)

Dames

Weir

water

c) What are the four reasons for treating water for human consumption. (2mks)

a) To kill disease causing micro – organisms such as cholera and typhoid bacteria

b) To remove chemical impurities

c) To remove smells and bad taste

d) To remove sediments of solid particles such as soil, sand and sticks

12. a) What is;

i) Drainage. (1mk)- **It is a methods of removing excess or lowering the water table from a marshy water logged land.**

ii) Pollution. (1mk) – **is any process which leads to harmful increase in the amount of chemical substances or forms of energy released into the environment by human activities.**

b) i) List six different types of drainage. (3mks)

- open ditches

- Underground drain pipes

- Cambered beds

- French drains

- Pumping

- Planting of trees

ii) Describe the agricultural practices which lead to water pollution. (2mks)

- **Use of inorganic fertilizer**
- **Use of pesticides**
- **Poor cultivation practices eg over cultivation, over grazing, cultivation along riverbanks**

13. a) Define the term soil fertility. (2mks)
    - **it's the ability of the soil to provide crops with the required nutrient in proper proportion for high production**

    b) State the characteristics of a fertile soil. (5mks)

    i) Good depth – to provide nutrient and strong anchorage

    ii) Proper drainage – property aerated

    iii) Good water holding capacity – to ensure that enough water is retained

    iv) Adequate nutrient supply – should supply nutrient in correct amounts.

    v) Correct soil pH

    vi) **Free from excessive infestation of soil borne pest and diseases**

14. a) What is the importance of organic matter in the soil? (5mks)
    - **Increases water holding capacity**
    - **Improves soil ferity**
    - **Provide food and shelter**
    - **Improves soil structure – moderate soil temperatures**
    - **Buffers soil pH – Reduces the toxicity of plant poisons**

    b) What are the functions of the following in the preparation of compost manure? (3mks)

    i) Topsoil- **To introduce micro – organisms necessary for decomposition of the organic materials**

    vii) Wood ash- **improves the level of phosphorus and potassium**

    viii) The layer of manure – **Provides nutrient to the potassiums**

15. Discuss the importance of livestock to a Kenyan farmer. ($2^1/_2$mks)

a) Source of food- some animal products are utilized by people as food

b) Source of income – products utilized at home and surplus sold

c) Cultural uses – livestock are highly regarded by different communities as status symbol, medium of exchange in social ceremonies, recreational purpose

d) Animal power – Carmel, donkeys and oxen are used on farms to provide power

e) **Provision of raw materials – eg texture industries raw material like wool fur, hides and skins.**

16. List the characteristics of a dairy cow. ($2^1/_2$mks)

a) **Bodies are wedge to triangular shaped**
b) **Have a straight topline**
c) **Have a well set apart hindquarter**
d) **Have a large and well developed udder**
e) **Have prominent milk veins**
f) **Have lean bodies**
g) **Large stomach capacity**
h) **Are docile with mild temperament**

17. a) Differentiate between the following breeds of livestock.

i) New Zealand white and californian white. (2mks)

New Zealand white – is white with red eyes

Californian white – white in color with one or more of the following parts being black ; ears, nose, paws and tail

ii) Large white and landrace. (2mks)

Large white – Long, large and white

- **Skin may have a few blue spot**
- **Snout broad and slightly dished**
- **Ears upright**

Landrace – White in color

- **Straight snout and long ears**
- **Drooping ear the face**

- **Long lean pig**

18. What is the color of each of the following breeds of livestock?

a) Wessex saddle backs. (½ mk)

Black body with the shoulder and only the front legs white

b) Toggenburg (½ mk)

Brown with two white strips running from the eye to the nose