FORM 2 AGRICULTURE MARKING SCHEME

1. **State four reasons why agriculture is an art** **2MKS**

-Involves;

- ✓ machine operations
- ✓ Measuring distances
- ✓ Harvesting of crops
- ✓ Tilling of land
- ✓ Feeding and handling of animals
- ✓ Marketing of agricultural produce

2. **Define the following terms;**

a) **Arable farming-** production of crops on a cultivated land

b) **Organic farming-**growing of crops and rearing of animals without using agricultural chemicals.

3. **State two ways in which agriculture contributes to the industrial development**

- ✓ Provides raw materials for industries
- ✓ Provides market for industrial goods
- ✓ Source of capital to start industries

4. **State four conditions under which shifting cultivation is practiced**

Practiced Where;

- ✓ land is abundant
- ✓ population is sparse
- ✓ land is communally owned
- ✓ number of livestock per unit area is low

5. **State four factors that influence spacing of crops**

- ✓ Type of machinery to be used.
- ✓ Soil fertility.
- ✓ Size of the plant.
- ✓ Moisture availability**.**
- ✓ Use of the crop.
- ✓ Pest and disease control.
- ✓ Growth habit of the crop.

6. **State the functional difference between a cross-cut saw and a rip saw**

- ✓ Cross cut saw cuts the wood across the grain while rip saw cuts the wood along the grain.

7. **Name the part used for vegetative propagation of each of the following plants**

a) **Cassava**- stem cuttings

b) **Sisal** -bulbils

c) **Pyrethrum-** splits

d) **Pineapples-**crown,slips, suckers

8. **State four aspects of rainfall that influence agricultural production**

- ✓ Rainfall distribution
- ✓ Amount of rainfall
- ✓ Rainfall reliability
- ✓ Rainfall intensity

9. State four reasons why soil is important to crops

- ✓ Supports plant life/ anchorage
- ✓ Provides nutrients and water
- ✓ Contains useful microorganisms
- ✓ Contains organic matter, food for microorganisms

10. Outline four harmful effects of strong wind in agricultural production

- ✓ Results in soil erosion / loss of plant nutrients
- ✓ Spreads diseases/ weed seeds
- ✓ Causes lodging in cereals
- ✓ High evaporation rate causes wilting

11. State four characteristics that make a crop suitable for green manure

- ✓ Leafy/highly vegetative
- ✓ Has fast growth rate
- ✓ Have high nitrogen content
- ✓ Capable of rotting quickly
- ✓ Be hardy

12. Give four methods of breaking seed dormancy

- ✓ Mechanical method
- ✓ Chemical method
- ✓ Soaking in water
- ✓ Heat treatment(partial**)**

13. Define the following terms as used in crop production

A seed bed- Piece of land which has been prepared to receive planting materials.

Nursery bed- Special seedbed prepared for raising seedlings before transplanting. Should not be more than 1M wide

14. State four causes of livestock diseases

- ✓ Physical causes
- ✓ Chemical causes
- ✓ Living organisms
- ✓ Nutritional causes

15. Give four constituents of soil

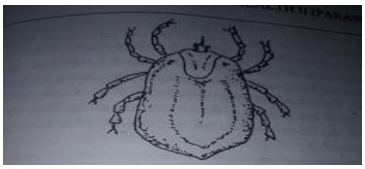
- ✓ Soil air
- ✓ Soil water
- ✓ Living organisms
- ✓ Mineral matter
- ✓ Organic matter

16.

i. Calf- young one of a cattle
ii. Bull- mature male cattle
iii. piglet – young pig from birth to weaning
iv. Cock – mature male bird
v. Gilt – young female pig from weaning to first parturition
vi. Boar – mature male pig

SECTIONB (20 MARKS)

17. The diagram below shows an external parasite. Study it carefully and answer the questions that follow



a) Identify the parasite tick **1 mark**

b) State three harmful effects of the parasite to livestock **3 marks**

- ✓ Ticks are vectors of livestock diseases e.g. ECF, redwater anaplasmosis and heartwater.
- ✓ Suck blood from the host leading to anaemia.
- ✓ Their bites causes wounds that acts as route for secondary infections.
- ✓ Cause irritation to the animals through their bites.
- ✓ Their bites lowers the value of hides and skin.
- ✓ Some produce toxins that may have adverse effects on the host.

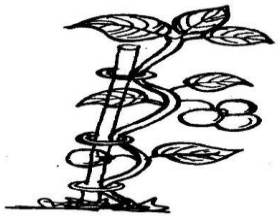
c) Handpicking and killing them

Starving ticks to death

Fencing of pasture lands

Burning infested pastures

18. The diagram below shows a field management practice in tomatoes. Study it and answer the questions that follow



a) Identify the practice - staking **1mark**

b) State three reasons for carrying out the practice above

- ✓ Enhances production of clean fruits.
- ✓ Facilitates spraying and harvesting.
- ✓ Controls incidences of disease outbreaks such as blight.
- ✓ Prevent infestation by soil borne pests.

c. Name one disease that attack cabbages in the field.

- ✓ Damping off.
- ✓ Black rot
- ✓ Downy mildew

19. Below is a table showing pH values of different soil samples. Study it and answer the

a) Which soil sample has the highest acidity

S_1

b State two ways in which the pH of soil sample S_8 can be lowered

- ✓ application of acidic fertilisers
- ✓ application of sulphur

d. Name two methods of soil sampling **2marks**

- ✓ Zigzag
- ✓ traverse

20. Below is a format of a farm record;

Date	Disease symptom	Livestock affected	Drug used	Cost of treatment	Remarks

a) Name the farm record illustrated above

Health record

b) Give two uses of a farm record shown above

- ✓ Shows the health status
- ✓ Determine the cost of treatment
- ✓ Used in selection and culling
- ✓ Show prevalent disease

c) Apart from the above record, give other two records kept by the farmer

- ✓ Breeding records
- ✓ Labor records
- ✓ Production records
- ✓ Inventory records
- ✓ Feeding
- ✓ Field operation

SECTION C (40 MARKS)

Answer any two questions in this section

21. a) Describe transplanting of a vegetable seedling 8mks

- ✓ Seedlings are ready for transplanting at 4 weeks old or when they have 4-6 true leaves.
- ✓ The nursery is watered 3-4 hours before lifting the seedlings.
- ✓ To ensure seedlings are lifted with a ball of earth/soil around the roots to minimise root damage.
- ✓ Select healthy and vigorously growing seedlings
- ✓ Lift them using a garden trowel.
- ✓ Transplant when the weather is cool.
- ✓ Seedlings should be transplanted at the same depth they were in the nursery bed to avoid rotting of the soft parts of the seedlings.
- ✓ Apply light mulch and shade if necessary.

b) Explain seven nursery management practices 7 marks

- ✓ Mulching.
- ✓ Watering.
- ✓ Weed control.
- ✓ Pricking out.
- ✓ Shading.
- ✓ Pest and disease control.
- ✓ Hardening off.

Note: ***They should be well explained***

C State five importance of crop rotation 5 marks

- ✓ Controls soil erosion.
- ✓ Improves soil structure
- ✓ Improves soil fertility
- ✓ Control of weeds.
- ✓ Control of soil borne pest and diseases build up.
- ✓ Maximum utilization of nutrients

22. a) State five reasons for keeping livestock healthy 5 marks

- ✓ Healthy animals grow well and fast enough to reach maturity quickly.
- ✓ Good health gives animals a longer productive life.
- ✓ Healthy animals give maximum production or performance, i.e. they maintain high productivity.
- ✓ Healthy animals produce good quality products that command a high market value.
- ✓ Healthy animals will not spread diseases to either animals or human beings.
- ✓ Healthy animals are economical to keep as the farmer spends less money on disease treatment hence reduction of production cost

b State five importance of water in animal's diet

- ✓ Component of body cells and many body fluids such as blood.
- ✓ Responsible for transportation of nutrients from one part of the body to another. Makes cells turgid maintaining the shape of body cells.
- ✓ Used in biochemical reactions in the body e.g. digestion of food.
- ✓ Helps to regulate body temperatures through sweating and evaporation.
- ✓ Helps in excretion of waste products from the body.
- ✓ Forms part of animal's product e.g. milk 83% water and an egg 55% water

c) Explain five predisposing factors to livestock diseases 10 marks

- ✓ **Species of the animal.** E.g. swine fever attacks only pigs and Newcastle affect only poultry.
- ✓ **Breed of the animal.** E.g. cancer of the eye will affect only Hereford breed of cattle and solar erythema affects only large white breed of pigs.
- ✓ **Age of the animal.** Certain disease are associated with animals of a certain age
- ✓ **Sex of the animal.** Certain diseases are associated with the sex of the animal.
- ✓ **Colour of the animal.** Animals which are black may suffer from heat stress

23. a) Explain five ways through which soil loses fertility 10 marks

- ✓ Soil erosion
- ✓ Leaching
- ✓ burning of vegetation cover
- ✓ monocropping
- ✓ continuous cropping
- ✓ change in soil pH
- ✓ accumulation of salts

Note: ***They should be well explained***

b) Describe water treatment using the chemical treatment system 10 marks

stage 1. Filtration at water intake

stage 2. Softening of water

stage 3. Coagulation and sedimentation

stage 4. Filtration

stage 5. Chlorination

stage 6. Storage

Note: The stages must be well explained