KCSE CLUSTER TESTS 11

Agriculture Paper 1

1.

- Cause physical damage to crops.
- Causes faster spread of pests /weeds /disease
- Cold wind cause stress to crops.
- Help in pollination (3×½)=1½

1.5 marks

2.

- Chemical properties of parent rock materials.
- Amount of humus/organic matter in the soil.
- Amount of water in the soil (2×1)=1mk

1 marks

3.

Parent rock material ,climate ,topography biotic or organic influence and time. 4×½=2mk

2 marks

4.

- Aeration /porosity
- Drainage
- Water holdings capacity/permeability /capillarity
- Stickness/consistency.
- Cation exchange capacity /availability of nutrients. (4×½=2mk)

2 marks

5.

- To prevent germination /sprouting
- To reduce insect /pest attack/reject rodent attack .
- To reduce fungal attack. (3×½=1½mk)

1.5 marks

6.

- Leaching
- Soil erosion.
- Plant uptake/absorption by crops
- Volatization /burning /denitrification (4×½=2mk)

2 marks

7.

- Promotes rapid vegetative growth
- Facilitates efficient utilization of P and K.
- Constituence of chlorophy1 molecule.
- Proteins synthesis in crops.
- Improve quality of leaf. (4×½=2mk)

2 marks

8.

- Reduced run off hence increasingly water filtration.
- Reduces loss of water through evaporation.
- Increasingly the amount of water retained in the soil. (2×½=1mk)

1 marks

9.

- Addition of alkaline fertilizer
- Addition of agriculture lime
- . Addition of organic manure (2×½=1mk)

1 marks

10.

- Soil fertility.
- Soil moisture content/rainfall amount
- Machinery to be used.
- Growth habit of the crop.
- Number of seeds per hole.
- Prevalence of certain pests/diseases. (4×½=2mk)

2 marks

11.

- Field operation records.
- Production records
- Inventory records.
- Marketing records.
- Labour records. (4×½=2mk)

2 marks

12.

- Standardize the produce.
- Prolong life of the produce.
- Add flavor to the produce.
- Improves quality of the produce
- Reduces bulkiness.
- Transform raw material to useable form . (3×½=1½mk)

1.5 marks

13.

- Well developed rooting system.
- Ability to roll up it leaves during hot weather. (2×½=1mk)

1 marks

14.

- Durability
- Cost

- Colour
- Strength
- Size. (2×½=1mk)

1 marks

15.

- Add/replenish nutrients in the soil.
- Improve nutrients value of pasture crop.
- Increase pasture herbage yield
- Modify soil PH.
- Encourages microbial activity (3×½=1½mk)

1 marks

16.

- Low nutrients content in the soil.
- Less rainfall/too much rainfall
- Poorly drained soil.
- In appropriate temperature.
- Excess wind.
- Inappropriate humidity
- Hail stones crop damages. (3×½=1½mk)

1.5 marks

17.

- Absence of bad adour.
- Light in weight
- Brown in colour.
- Moist.
- Original nature of material not noticeable. (3×½=1½mk)

1.5 marks

18.

- Conserves moisture /reduces soils moisture evaporation.
- Smothers and kill weeds.
- Absorbed the heat and keep the soil warm. (3×½=1½mk)

1.5 marks

19.

- Reduces population pressure in over populated areas.
- Increases agriculture production.
- Creates employment.
- Creates tsesefly consolidated barrier. (3×½=1½mk)

1.5 marks

20.

- Nematode attack. (2×½=1mk)
- Bacteria wilt

1 marks

21.

- Silo (1×½=½mk)
- Silage (1×½=½mk)
- P-drainage (1×½=½mk)
- Use –drains rain water hence protect the material (1×½=½mk)
- R-polythene sheet (1×½=½mk)
- Use-keeps the material air/water tight (1×½=½mk)

4 marks

22.

- i.
- C 2
- Maize stalk bore
- Army worms
- Locust (2×1)=2mks
- C 1 maize smut (1×1)=1mk
- ii.
- Maize has a well developed root system to absorb dissolved fertilizer.
- Leaves well developed to absorb forliar feed. (1×1)=2mks
- iii. 10% (Reject without %) (1×1)=1mk

5 marks

23.

- a. Bench terrace (1×1)=1mk
- b. Stone wall (1×1)=1mk
- c. -Reduced the speed of run-off hence encourages percolation. (1×1)=1mk
- -drainage channel at the end of the riser divert excess water into a water channel hence reducing erosive force. (2×½)=1mk

3 marks

24.

a. Namatodes. (1×1)=1mk

b. Bananas (1×1)=1mk

c. –cause wounds in plant tissues leading to secondary infection.

-inject toxic substance in the plant

-leads to rotting of the plant roots.

-cause abnormal tissue structure in plant roots. (3×1)=3mk

3 marks

25.

a. Marcotting /aerial layering (1×1)=1mk

b. -Use of correct hormones /auxin

-provides moist growing medium.

-ringing the bark/debarking (3×1)=3mk

4 marks

26.

a.

- Proper drying grain before storage to make them hard to pest penetration.
- Proper spraying /dusting with appropriate chemical on the structure to kill pests.
- Use of proper storage facilities/leak proof stores.
- Removal of affected grains/store clean produce.
- Use rat guards to control rodents.
- Cleaning store before use.
- Dusting the grain with appropriate chemical before storage. Naming 1mk, explaining 1mk (10mks)

b.
i. -Done at on set of rains

-select desirable variety of napier grass for ecological zone.

-use health planting material -

place planting material in the furrow holes at the recommended spacing.

-cover the planting materials with soil to an appropriate depth. -use cutting /splits for planting.

-cutting should have 3-4 nodes (5×1)=5mk

ii. -Weed control

-by cultivating

-by uprooting

-By use of suitable herbicides

-By interplanting with legumes that cover grounds e.g desmodium etc.

-weed control done during establishment stage. (5×1)=5mk

20 marks

27.

a. –use of healthy planting material to prevent infection.

-proper pruning of crops –discourages disease causing organisms.

-planting resistance variety withstands the effect if certain pests /diseases.

-observes field hygiene -kill diseases causing organism.

-roqueing -destroy pathogen which could cause diseases.

-Proper drying of cereals -makes the seed coat difficult to be attacked .

-proper spacing -reduce spread of diseases.

-proper seedbed preparation -control some diseases e.g

Armillary root rot in tea.

-Quarantine -prevents spread of diseases .

-heat treatment -control ratton stunting diseases in sugar cane.

-crop rotation -reduce diseases build up. -close season-avoid build up of diseases causing organism.

--timely harvesting -reduces disease build up. -eradicate alternate host of disease to reduce disease build up. (stating 1mk , explaining 1mk (12mks)

b. –Time is wasted in movement ,this is because of distance between parcels.

-difficult to properly and efficiently control weeds and pest because the parcels are usually surrounded by neglected land that can easily spread disease /pest.

-difficult to follow a sound farm plan because of distance between fragments and the farmers home.

-difficult to supervise scattered plots, some workers cannot work well without supervision.

-control of parasite since animals from neighboring plots move between plots.

-difficult in getting agricultural extension services :extension workers don't concentrate well with the farmers.

-Difficult in carrying out soil conservation measures any attempt is destroyed by run-off from neighbouring areas/fields.

-may lead to reduced total yield as a results of the a above problems. 6points well explained ×2=12mks

20 marks

28.

a. –title deed can be used by the farmer to secure credit facilities necessary for land development.

-since land is registered land disputes are minimized.

-tenure security encourages farmers to invest in long term and permanent projects.

-it enables the occupant the lease all or part of the land thus get extra cash.

b. –liquid pesticides :they are soluble in water or oil for easy application .

-wettable powders: they are mixed with water to form asuspension before application.

-pre-emergence herbicides are applied soon after the crop have been sown but before they emerge.

-post-emergency herbicides: are applied after crop germination.

-selective herbicides :are herbicides that can injure one plant and allow the other plant to escape. -non-a selective herbicides :are herbicides that injure all plants they come into contact with. 5well explained ×2=10mks

c. –the farmer have no incentive to manage and develop the land.

-No individual has the responsibility to take care of the land.

-Poor yields as a result of overstocking of livestock.

-poor breeding program since livestock keepers have no incentives to improve the quality of animals.

-poor pest and diseases control as a result of mixing animals.

-farmers cannot access credit facilities by using land as security since they do not have the land title dead. (6x 1=6marks)

20 marks