FORM FOUR CLUSTER KCSE MODEL8

AGRICULTURE PAPER 1 ANSWER

SECTION A (30 Marks)

1. - To kill weeds.

   - To incorporate manure and other organs matter into thesoil.

   - To destroy pests and other diseases causing organisms.

   - To aerate the soil.

   - To encourage the penetration of plant roots in thesoil.

   - To make subsequent operation easier.

   - To promote water infiltration. (any 4 points x½=2mks)

2. - Timely planting.

   - Use of clean seeds/planting materials.
   - Proper spacing.
   - Clean seedbed. (any4x½=2mks)

3. Brown if induces forking of the carrot tubers/reduces cropquality

4. - Extension and training.

   - Banking.

   - Credit.

   - Artificial insemination.

   - Agricultural research.

   - Marketing.

   - Veterinary services.

   - Farm input suppliers.

   - Tractor hire services. (any 6x½=3mks)

5. - Soil type.
   - Soil moisture content/rainfall availability.
   - Size of the seed.
   - Type of germination. (any 4x½=2mks)

6. - Budding –practice of uniting a vegetative bud to a stem.
   - Grafting –practice of uniting two separate woodystorms.

7. - Damping off.
   - Black rot.
   - Downey mildew. (any 2x½= 1mk)

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8. - Perishability of produce.

- Bulkness.

- Seasonality.

- Storage.
- Poor transport system.

- Changes in market demand.

- Lack of market information.

- Changes in supply.

- Limited elasticity of demand. (any 4x½= 2mks)

9. - Leaching.

- Soil erosion.

- Mono-cropping.

- Continuous cropping.

- Change in soil pH.

- Accumulation of salts. (any 4x½= 2mks)

10. Advantages of using seeds:

- Easy to treat against soil borne pests and diseases.

- Easy to store-not bulky.

- Easy to handle during planting making operation faster.
- Easy to use machines for planting.

- Easy to apply fertilizer and manure together with seeds while planting.

- Possible to develop new crop varieties due to cross pollination. (any 4x½= 2mks)

11. - Amount.

- Distribution.

- Intensity.

- Reliability.

12. -Over-sowing
–establishment of suspension pastures grass or legumes in an existing grass pasture. (1x1=1mk)
- Under-sowing
-establishment of a pasture under a cover crop.(1x1=1mk

13. - Ability to produce large quantities of seeds.

- Weed seeds remain viable in the soil for a long period of time.

- Most weeds seeds are easily and successfully dispersed.

- Some weeds have ability to propagate vegetatively.

- Weeds have elaborate root system for support/nutrient absorption

and H2o intake. - Short life cycles.

14. - Seed purity.

- Germination percentage.

- Spacing.

- Number of seeds per hole.

- Purposes of the crop.

15. (i) -For easy germination of small seeded crops.

- Facilitation uniform germination of seeds. (Any 1x1=1mk)

(ii) -To prevent small seeds from being carried away by wind.

-To prevent soil erosion.

- Increases seed-soil contact. (Any 1x1=1mk)

16. -Topography –The steeper the slope the higher the rate of soil erosion.

- Amount and intensity of rainfall.

- Type of soil.

- Soil depth

- Overstocking.

- Deforestation.

- In discriminates burning of vegetation exposes the soil to erosion agents.

- Clean weeding.

- Ploughing up and down the slopes.

- Monoculture/continuous cultivation.

- Ground cover/presence of trees/presence of vegetation

SECTION B (20 Marks)

17.

(a)

PLOT A	PLOT B
Year 1:Irish potatoes	Year 1:Cabbages
Year 2: Beans	Year 2:Irish potatoes
Year 3:Maize	Year 3:Beans
Year 4:Cabbages	Year 4:Maize
(1mk)	(1mk)
PLOT C	PLOT D
Year 1: Beans.	Year 1: Maize.
Year 2: Maize.	Year 2: Cabbages.
Year 3: Irish potatoes.	Year 3: Beans.
Year 4: Cabbages.	Year 4: Irish potatoes.
(1mk)	(1mk)

(b) – Because they have common diseases and past.

- Have similar nutrient requirement. (Any 1x1=1mk)

18. (i) Couch grass/Digestion scalarum. (1x1=1mk)

(ii) Because H has got underground rhizomes which grow deep in thesoil.

(iii) It competes with crops for nutrients, soil moisture and space resulting in low yields. (1mk)

(iv) (i) Use of appropriate herbicides. (1mk)

(ii)Physical removal of rhizomes. (1mk)

20. (a) Drainage is a method of removing excess water or lowering the water table from a marshy waterlogged land.

(b) - Increase soil aeration.

- Increases soil volume.

- To raise soil temperature.

- To increase microbial activities.

- To reduce soil erosion.

- To remove toxic substances. (Any 4x1=4mks)

SECTION C (40 Marks)

21. - It is component of body cells andfluids.

- Transportation of materials from one part of the body to another.

- It makes cells turgid thus maintain the shape of body cells.

- Regulates body temperature/cools the body.

- Helps in excretion of wastes products from thebody.

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- Forms part of animal products e.g. milk andeggs.

- It used in biochemical reactions as a solvent.

- Helps in digestion. (Any 4x1=4mks)

(b) -Kill diseases germs/diseases causing organisms.

-Removes chemical impurities.

-Removes small and bad test.

-Removes solid particles/sediments. (4x1=4mks)
(c) Stage 2 :

(i) Filtration at intake. (1mk)

(ii) Water is made to pass through a series of serves in to intake pipes.

(iii) Large solid particles are reserved (1mk)

Stage 2:

-Softening of water.

-Water is mixed with soda ash (sodium bicarbonate) which softens it and a turn.

(Aluminium sulphite) which coagulates solids particles. (1mk)

Stage 3:

-Coagulation and sedimentations.

(i)Solid particles settle down. (1mk)

(ii)Aeration in the open tanks for 36hrsto kill Bilharzia worms. (1mk)

Stage 4:

Filtration:

-Water pass through layers of different sizes gravel and sieved to remove all the remaining solid particles.

Stage 5:
Chlorination:
-Chlorine is added to the clean water to kill micro-organisms. (1mk) Stage 6:

Storage:

(i) Treated water is stored in large tanks. (1mk)

(ii) Water is well covered. (1mk)

(iii) Water is distributed to consumer from the storage tank. (1mk)

22. (a) Any organized action designed to improve the structure of land term and land use. (1x1=1mk)

(b) -To encourage soil and water conservation.

- To increase productivity of land.

- To encourage commercial farming.

- To encourage farmers to undertake long term investments on land.

- To increase productivity of labour.

- The efficient and effective utilization of land. (any 4x1=4mks)

(c)(i) Land consolidation:

- It is the putting of fragmentation land together under one holding.

- The ownership of individual's fragments of land is established.

- The land is surveyed/measured to establish the sizes of all the parcels belonging to one

- individual farmers.

- The fragments are put together into one holding/around the biggest or most developed

- parcel.

- The registration of each holding is done at the district land registry.

- Land tittle deed land certification under one holding is licensed. (6x1=6mks)

(ii) Land adjudication and registration.

- Ownership of land within a specific area is established.

- The land is surveyed/measured.

- Detailed maps showing existing boundaries of the land drawn by surveyors.

The land is seconded against individual owners.

- The maps land record or the land are submitted to the district land registry.

- The land is registered.

- Title deeds/land certificate are issued. (7 points x1=7mks)

(d) Settlement and resettlement. Settlement is the occupation of land which was previously uninhabited while resettlement is the transfer of people from a adversely populated areas to sparsely populated areas. (2mks) mark as a whole

23.