KAPSABET HIGH SCHOOL

MARKING SCHEME

1. a)
   - small farms
   - Huge capital ½ each (1mk)
   - Skilled labour
   - Produce for sale
   - Mechanization done

   b)
   - High yields per unit area
   - Proper use of soil resources ½ each (1mk)
   - Guards against total loss

2.
   - Improves the soil nutrient content
   - Improve soil structure ½ each (1mk)
   - Improves soil temperature

3.
   Low Temperature
   - Slow growth rate
   - High incidence of diseases of CBD ½ each (1mk)
   - Improves quantity

   High Temperature
   - Causes wilting ½ each (1mk)
   - Increases growth rate
   - Increase in pests attack

4. a)
   Test or presence of soil micro-organisms (½ mk)

b)
   A - Lime water turns milky
   B- Lime water remains clear ½ each (1mk)

c)
   Presence of organisms in A produce CO_2 that turns lime water milky. (1mk)

5.
   - -Crop to be planted
   - Implement available 3 × ½ (1 ½ mks)
   - Type of soil
   - Nature of the land

6. a)
   Situation in which least possible cultivation operations are carried out in crop production (1mk)

b) - Planting in another crop field
- -Clearing f land then plant 4 × ½ (2mks)
- Use of herbicides to kill weeds
- Planting on stubble land

7 a)
- Surface irrigation- Flood irrigation
- Sub-surface irrigation e.g underground pipes 2 × ½ (1mk)
- Overhead irrigation – eg sprinkler

b)
- Irrigation
- Watering canals
- Domestic use 4 × ½ (2mks)
- Diluting chemicals
- Construction works
- Processing produce

8.
- Show next date of treatment/vaccination 3 × ½ (1 ½ mks)
- Occurrence of diseases
- Response to diseases

9 a)
Diagonal/Transverse ½ mk

b)
- Avoid contaminants ions/use sterilized containers
- Avoid unusual sites e.g. Anthills 3 × ½ (1 ½ mk)
- Avoid mixing p soil and sub-soil
- Collect at the correct depth

c)
- Determine nutrient content
- Determine soil PH/ Fertilizer to be used 4 × ½ (2mks)
- Determine mineral deficiency
- Expected yields

10.
- Break dormancy
- Control pests and Diseases 2 × ½ (1mk)
- Faster germination/uniform stand

11.
- Type of soil
- Moisture in the soil 2 × ½ (1mk)
- Species of Beans
- Machinery used

- Purpose of Beans
- Stored of beans

12.
- Security for loans
- Security of land ownership 4 × ½ (2mks)
- Minimize disputes
- Encourage farmer to invest

13.
- Wires
- Stones 3 × ½ (1 ½ mks)
- Concrete (sand/cement/gravel)
- Wood/metal rods/pegs.

14.
- Damage crop roots e.g. Nematodes
- Uproot planted seeds
- Attack fruits e.g. fruit flies
- Transmit diseases 4 × ½ (2mks)
- Causes retarded growth
- Destroy leaves

15.
- Training
- Giving
- Supervision
- Good Human Relations 4 × ½ (2mks)
- Assigning tasks
- Proper motivation

SECION B

16.

Cropping - removal of fish of marketable size from the pond

Harvesting – removal of all fish from the pond

Mark as a whole 2 ×1= 2 marks

- Forage spp
- Stage o harvesting 3 × 1 (3mks)
- Mode feeding
- Type of forage (mixed/pure stand)

1. **Characteristics of extensive farming systems**
    - Large tracts of land
    - Low capital investment

- Low labour per unit area
- Low yields per unit area

16.

17.

- Stage of growth
- Plant thropology 2 × 1 (2mks)
- Mode of action
- Environmental contributions

18.

- Forage Spp
- Stage of harvesting
- Length of drying 2 × 1 (2mks)
- Weather conditions
- Storage conditions

2. 21. **Physical factors in soil formation**

- Wind
- Water
- Moving ice
- Temperature

22. **Factors that determine depth of planting**

- Soil type
- Soil moisture content
- Size of the seed
- Type of germination

23. **Harmful effects of ticks on livestock**

- They suck blood leading to anaemia
- They cause wounds that lead to secondary infection
- They transmit livestock diseases
- They cause irritation to the animal
- They lower the value of hides and skins

SECTION C

24. a)

- Timely planting- Early planting makes crop escape pest attack e stalk borer.
- Timely harvesting- storage pests may attack crop in the field e.g. weevils.

- Proper Tillage- field cultivation exposes pests which are soil borne e.g. white grubs, scorched by soln.
- Close season- planting of crops in a certain season to avoid pest attack cotton Bollworm
- Trap cropping- plant a crop and destroy once attacked by pests
- Crop rotation- Alternate crops which are attacked by different types of pests eg Groundnuts and potatoes attacked by Nematodes with maize and beans
- Plant resistant varieties- breeder develops breeds which are resistant to some diseases. e.g. goose necked sorghum against Bird pests.
- Field Hygiene- keeps the field free from pests. Removal of infected plants from the field.
- Destruction of alternate hosts- some weeds act as alternate hosts for pests.
- Crop nutrition - makes crops strong and resistant to pests 1 × 10 (10mks)

b)

- Use of soil moisture- crops will use the available moisture in the soil.
- Soil Nutrients- plants will benefit from the Nitrogen Flush
- Market prices- Early planting will make the produce benefit from the early market prices.
- Pests and diseases- Early planting makes the crops escape the pests and diseases which are soil borne
- Crops vigour- Early planting enable the crops to growth with vigor(strong and uniform)
- Timely harvesting- Early planting makes harvesting take place early

State 1 mk Explain 1 mk (10mks)

25. a)

- Measurement of land to establish sizes by recommended surveyors
- Description of land- shows its location
- Recording and mapping of land in the land registry. 1 × 5 (5mks)
- Resolving any objections if raised
- Submission of the records for registration

b. Issuing of the land title Deed **Reasons for carrying out minimum tillage**

- To maintain soil structure
- To conserve soil moisture
- Prevent humus exposure
- Prevent root disturbance
- Control soil erosion
- Reduce cost of cultivation

6× 1= 6 marks

c. **Ways soil lose fertility**

- Leaching – nutrients carried to lower zones by infiltrating water leads to loss of fertility.
- Soil erosion – carrying away of top fertile soils by erosion agents loss of soil fertility.

- Mono cropping – growing one crop continuously on the same piece of land results in exhaustion of nutrients thus loss of soil fertility.
- Continuous cropping – harvested crops remove large amounts of nutrients from the soil which makes soil deficient of this nutrients.
- Burning vegetation cover- burning destroys organic matter and soil structure.
- Change in soil pH – due to use of fertilisers leads to change in soil pH thus affect activity of microorganisms.

(First 4; mention 1 mark, well explained 1 mark)

4 ×2= 8 marks.

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26. A.Field management practices in tomatoes

- Gapping
- Topdressing
- Weeding
- Staking

b.Factors that determine water requirements in an animal's body

- Ambient temperature
- Type of feed eaten by animal
- Level of production
- Body size
- Species of the animal
- Amount of work

5×1= 5 marks

c.Transplanting tree seedlings

- Dig holes for transplanting
- Transplant at onset of rains
- Water the seedlings a day before transplanting
- Place seedlings at the centre of the hole
- Cut and remove polythene sleeve using a sharp knife
- Add soil around the tree until the hole is filled completely
- Firm the soil gently around the tree seedling
- Plant at the same depth as it was in the nursery.

- Change in soil pH – due to use of fertilisers leads to change in soil pH thus affect activity of microorganisms.

(First 4; mention 1 mark, well explained 1 mark)

4 ×2= 8 marks.

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- Pest control
- Disease control

7×1 = 7 marks