KAPSABET HIGH SCHOOL
MOCK 2020
MARKING SCHEME
443/1
NOV /DEC 2020

1. – High risk of total loss incase of crop failure
   - under utilization of some nutrients
   - build up of specific crop pest/diseases/weeds
   - only specific mineral nutrients are absorbed/exhaustion of certain mineral nutrients from soil
   - results in soil erosion in crops with poor coverage
   - faster spread of pests and diseases
   - leads to destruction of soil structure
   - loss of soil fertility

   ($4X^1/_2 = 2$)
2. – Soil depth/drainage/aeration
   - Water holding capacity
   - Level of nutrients/cat ion exchange
   - Soil PH/ soil borne pests and diseases

   ($4X^1/_2 = 2$)
3. – Enhance seed germination
   - Enhance plant growth
   - Enhance soil microbial activities
   - Improves quality of crops e.g Tea, pineapple

   ($2x^1/_2 = 1$)
4. – Facilitates aeration
   - Facilitates drainage
   - Breaks hard pans/facilitates water infiltration
   - Brings up previously leached nutrients
   - Facilitates development of deep rooted crops
   - Exposes soil borne pests and diseases agents
   - Removes deeply rooted weeds.

   ($4x^1/_2 = 2$)
5. (a) – Type of soil
   - Types of crop to be growth
   - Source of water/water availability/rainfall pattern/quality of water
   - Size of land to be irrigated
   - Capital availability/costs involved
   - Profit ability of irrigation/viability of enterprise
   - Topography

   ($3X^1/_2 = 1^1/_2$)

   (b)- River/streams
   - Lakes
   - Dams

($3x^1/_2 = 1\ ½$)

6. Journal
   - Cash book
   - Ledger
   - Inventory

($4x^1/_2 = 2$)

7. (a) This is the production in which each additional unit of input results to a larger increase in output than the proceeding unit of input (OWTTE)

   (1x1=1)

   (b) – Short term credit
   - Medium term credit
   - Long term credit

   ($4x^1/_2 = 2$)

8. Blossom end rot ($^1/_2$)
9. (a) Leaf size (broad and narrow leafed)
   - Growth cycle (annual, Biannual and perennial)
   - Habitat (aquatic and Terrestrial)

   ($2x^1/_2 = 1$)

   (b) – Ability to produce large quantities of seeds
   - Ability of seeds to remain viable in the soil for a long period of time
   - Easy and successful dispersal mechanism of most weed seeds
   -Ability to survive even under adverse conditions
   - Ability to complete life cycle in a short time
   - Elaborate root system

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   ($4x^1/_2 = 2$)

10. (i) Reduce competition/ensure healthy seedlings
    (ii) Promote nitrogen fixation

11. (i) – Rapid growth rate
    - Production of abundant foliage
    - Rich in plant nutrient /leguminous /rich in nitrogen
    - Ability to decay rapidly
    - Adaptable to wide range of condition/hardy

    ($3x^1/_2 = 1\ ½$)

    (ii) Introduces micro – organism necessary for decomposition of organic material

    (1x ½ = ½)

12. – Reduce surface run off/increase water infiltration
    - Reduce evaporation

($2x^1/_2 = 1$)

13. – saves time and money
    - Makes it easy to have a sound farm plan e.g rotation programme
    - Eases soil conservation measures
    - Eases supervision as enterprise are at one place
    - Facilitates mechanization/economical to mechanise

($2x^1/_2 = 1$)

14. (a) Fixes costs are costs that do not change with the level of production while variable costs are costs that change with the level of production (1mk)
    Mark as a whole

    (b) – casual labour costs
    - Fertilizer / manure costs
    - cost of chemicals e.g pesticides
    - Fuel costs
    - cost of repair of machinery

($4x^1/_2 = 2$)

15. $^5/_{100}$ x 400kg = 20kg
    - A mark for formulae
    - A mark for answer with units

    (b)- It makesit possible for crops to be produced during the dry season
    -It makes it possible to reclaim land for agricultural production/grow crops in arid and semi arid areas
    -It supplements rainfall
    - Sustains proper growth of crops which require plenty of water e.g rice.
    -Created favourable temperature for proper plant growth
    -Facilitate fertigation
    - Crops can be grown under special structure e.g green house

($4x^1/_2 = 2$)

SECTION B

16. (i) (a) (i) Direct nursery bed/nurserybed/nursery (1 mk)
    (ii) 0.6M. (Ref without units) (½ mk)
    (iii) – reduce light intensity
    -regulate temperature
    -intercepts rain drops/hailstones (2x 1= 2)
    (b) – reduction of watering
    Gradual removal of shade (1mk)

(2x1= 2)

17. (a) K – multiple stem pruning
L – Single stem pruning

($2x^1/_2 = 1$)

(b) - Cut the main stem of seedling to allow growth of suckers
- Select two health suckers and allow to grow
- remove the other remaining suckers

(3x 1= 3)

18.

Balance sheet for Mrs. Kamau as at 30th June 2014

Assets		**Liabilities**	
Fixed assets	Ksh.	**Long term liabilities**	Ksh.
Buildings	50,000		
Disc ploughs	16,000	loan	50,000
Working tools	12,000		
Land	80,000		
Cattle	40,000		
Current assets		**Current liabilities**	
Cash in hand	20,000	Bank over draft	24,000
Cash in bank	66,000	Creditors	20,000
Debtors	1,600		
		Total liabilities	94,000
		Net worth/Net capital	206,000
TOTAL	**300,000**		**300,000**

Title of the Account – 1mk

Correct label of columns – 1mk

Correct entries of Assets – 1mk

Correct Network value – 1mk Total 5mks

19. (i) Capillarity in different soils (1 x 1 = 1mk
    (ii) G- Sandy soil
    H – Loam soil
    J – Clay soil

    ($3X^1/_2 = 1^1/_2$)

    (iii) G – Rough/coarse texture J – fine texture ($2x^1/_2 = 1$)
    (iv) – Addition of organic manure
    - Addition of lime

    (1x1= 1)

SECTION C

20. (a) Purchase order from Biashara farm to KFA

Biashara Farm
address
……..
Date 5/1/2016
No……

Local purchase order
To KFA address
……

Please supply the following items

Item no.	Particulars/description	Unit	Quantity
1.	Dairy meal	70kg bag	20
2.	Bran	70kg bag	16
3.	DSP fertilizer	50kg bag	18
4.	Seed maize	2kg bag	45
5.	Shearing knife	Medium size	8

Orderedby……sign……
Authorized by
……sign……

(ii) Dairy meal 1100/= x 20 = 22,000/= ($^1/_2$mk)
Bran 700/= x 16 = 11,200/= ($^1/_2$mk)
Dsp fertilizer 1,500 x 18 = `27,000/= ($^1/_2$mk)
Seed Maize 300 x 45 = 13,500/= ($^1/_2$mk)
Knives 300/= x8 = 2,400/= ($^1/_2$mk)

Total = 76,100/= ($^1/_2$mk)

(b) – Crop rotation helps to break life cycle of disease causing organism
- rogueing infected crop stops the disease from spreading
- Use of certified seeds/disease free plants prevent introduction of pathogens into the field.
- Close season breaks life cycle of pathogens
-Early planting/timely planting crops establish faster before attack.
- Proper spacing creates unfavourable micro –climate for some pathogens.
- Weed control prevents harbouring of some pathogens
-Weed control prevents harbouring of some pathogens
_ Use of resistant varieties prevents attack by pathogens
-Application of appropriate chemical kills pathogens
- Use of clean equipment reduces chances of contamination with disease causing organisms.
- Quarantine prevents introduction of pathogens into the farm.
- Heat treatment kills micro – organism
- Pruning gives unfavorable micro-climate for some pathogens.
- Control vectors to control spreading of pathogens
- Proper nutrition helps plant to withstand plant diseases/control deficiency diseases.
- Destruction of crop residues to kill pathogens.

(8 x 1 = 8)

(c) – help farmer to predict the profitability of an enterprise

- enables farmer to detect problems easily so that correction is done in good time before losses occur

-Assist the farmer to make management decisions

- makes farmer to make effective changes in the organization

-Ensures periodic analysis of the farm business

-helps to estimate required production resources e.g labour

-Helps when negotiating for Agricultural credit

- enhances efficiency to meet targets

- Helps in controlling various aspects of production in the farm

- For future reference

(3x1 = 3)

21. (a) – lack of ground cover exposes soil to agents of soil erosion
    - Steep slopes increases the speed of surface ran off hence erositive power of work
    - Light/sand soils are easily carried away by agents of erosion.
    - Shallow soils are easily Saturated with water and carried away
    - High rainfall intensity leads to Saturation of soils hence increases in soil erosion/surface run off.
    - Frequent cultivation/over cultivation pulverizes the soil making it easy to detach and carry away
    - Over stocking leads to overgrazing this destroys ground cover exposing it to agents of erosion.
    - Burning /Deforestation destroy vegetation cover and exposes soil to agent of erosion.
    - Ploughing up and down the slope creates channels.
    - Cultivation of river banks destroys riverine vegetation and destroys soil structure exposing it to agents of erosion.
    - Cultivation the soil when too dry destroy soil structure making it easy to be eroded
    - Long slopes increases volume and speed of runoff hence increasing erosive power.
      (Factor with explanation to score)

(8x 1 = 8mks)

(b) -Diversification; so that if one enterprise fails the farmer has something to rely on;
- Insurance against losses; so that incase of failure the enterprises are covered
- Strategic farming/inventing marketing; keeping farm products and selling at a time when prices are high.
-Carrying out flexible enterprises engaging in enterprises that can be stopped & started early as conditions change
- Rationing of inputs/using just sufficient input; so that incase of losses the costs are not too high.
- Using of more certain husbandry practices; using practices that the farmer is surer of and has used in the past.
- Contract marketing/edging; making arrangement with marketing agencies in advance so that changes in prices after the arrangement do not change the prices of the farmer's produce.
-Selecting more certain enterprises; selection of enterprises that have done well in the area/tried through research.
-Maintain high liquidity; for use in case of any eventuality.
- Adopting modern methods of production/modern technology; Adopting risk reducing techniques of farming e.g vaccination irrigation, disease resistant varieties etc.

½ mk for mentioning factor

½ mk for explanation

(7x1 = 7)

(c) (c) – Leaves are picked selectively for the highest quality
- Pluck top two leave and a bud for fine plucking /3 leaves and a bud for coarse plucking

- Use plucking stick to maintain plucking table
- Pluck at 5-7 days interval in rains and 10-14 days in dry periods/cold periods
- Put plucked tea in woven buskets to facilitate air circulation/prevent fermentation
- Do not compress the leaves in the basket to prevent heating up/ browning
- Put plucked tea in cool and shaded places
- Deliver to the factory on the same day

(5 x 1 = 5)

22. (a) (i) – Heading (H) = 1mk
- Smooth curves (SC) = 2X1 = 2mks)
- Curve identified (CI) = 2 x ½ = 1mk
- Curve plotting (CP) = 2x1 = 2mks
- Scale (S) = 2 x ½ = 1mk
- Labeling axes (A) = 2 x ½ = 1mk

(8mks)

(ii) Ksh. 13.40 ǂ 10cts (13,30- 13.50)
(iii) 140 ǂ 1kg (139 – 141 kg)
(iv) Ksh 13. 80 ǂ 10cts (13.70 – 13. 90)

(b) – Has an insulating effect thus modifies /regulates soil temperature
- Prevents water evaporation therefore moisture is retained in the soil for the plant to use
- Controls soil erosion by intercenting rain drops before they hit the soil reducing the speed off surface runoff and increasing water infiltration
-Organic mulch decomposes into humus thereby improving soil structure/water holding capacity/water retention.
-After decomposition improves soil fertility by releasing nutrients
- After decomposition organic mulch it buffers soil PH/ increase cat ion exchange capacity

NB/ explanation must come out for score)

(5x1 = 5mks)

(c) – Mulching
- Application of organic manure/organic fertilizers
- Crop rotation
- Use of medicinal plant products to control diseases and parasites
- Rearing of livestock on natural feed staff/organic growth feedstuffs
- Physical/cultural/Biological pest/weed/parasite and disease control/accept specific control measure given

(4 x 1 = 4)

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