KENYA NATIONAL EXAMINATION COUNCIL
REVISION MOCK EXAMS 2016
TOP NATIONAL SCHOOLS

MARANDA SCHOOL
AGRICULTURE
PAPER 1
MARKING SCHEME

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MARANDA SCHOOL KCSE TRIAL AND PRACTICE EXAM 2016

AGRICULTURE

PAPER 1 / 443/1

MARKING SCHEME

SECTION A (30 MKS)

1 – Light intensity
- Light duration 1day length
- Light wave length |quality of light any2x½=1 mk

2. - Organic mulch
- Crop residues / animal remains
- Green manure
- Compost manure any 3x½=1½ mks

3. – To settle landless citizens
- To relive or ease population pressure
- To increase agricultural productivity
- To create employment | improve peoples standard of living Any 3x½=1½mks

4. – Scorching of leaves
- Delayed maturity
- Excessive foliage growth
- -Lodging |Excessive succulency
- -cause| Encourage Blossom End Rat Any 3x½=1½mks

5. Fertilizers
- seeds
- pesticides
- Fungicides
- casual labour
- fuel costs Any 4x ½ =2 mks

6. - Repair /replace work out parts
- Regular clearing to remove dirt
- Regular painting to prevent rust (Any 2x ½ =1 mk

7. Appropriate depth
- proper drainage
- well aerated
- good water holding capacity
- correct PH
- Adequate nutrient supply
- Free from excessive infestation Any 4x ½ =2 mks

8. seapage
- Breakages/soiling
- Oxidation Any 2x ½=1mk

9. A point at which damage caused by pest is beyond the tolerance level of the crop hence must be controlled` OWTE (1mk)

b) Opportunity cost –the value of the forgone alternative (1mk)

c) Marginal product-Additional unit of output resulting from additional unit of an input (1mk)

10. a) – N- fertilizer is highly soluble hence would be absorbed easily with well established Roots (1 mk)

b) Topping –to encourage fresh pasture growth and avoid empty patches (1mk)

c) Stocking –to allow cobs to dry to the minimum moisture of 11-13% (1mk)

11. –lack of water /Drought
-disease /pest /weeds
-poor drainage /soil structure/aeration
-Damage during transplanting Any 3x ½ =1 ½ mks

12 –Flood irrigation
- Furrow /corrugated irrigation
- Basin irrigation

13. –Expansion of industries /job opportunities
- Improved living standards
- Creation of wealth/Gov't revenue

14. Per capital income
Average income of citizens of a country
Land reforms – action designed to manage land to improve productivity and tenure System (1mk)

15. - Broad based terraces
- Narrow based terraces
- Bench terraces
- Fanya juu /chini (Any 2x ½ =1mk)

16. - open ditches
- underground pipes
- French drains
- cambered beds
- pumping out (Any 2x ½ =1mk)

17 - Nantes
- oxhart
(2x ½ =1mk)

18 a) Hybrid are bred from pure breeds under controlled pollination while composite are bred from various pure breeds under uncontrolled pollination (1mk)

b)

undersouring	over souring
Establishing pasture under Cover crop e.g. maize	Establishing legumes where grass pasture exists (1 mk)

(mark as a whole)

19. Is an estimate of income and expenditure in a given production period. (1 mk)

Section B (20 marks)

20. 1) maize stalkborer (1 mk)
2) dusting using appropriate pesticide
3) Burning crop residues (Any 2x1=2mks)

21. a)A- zig zag
B-random sampling (2x ½ =1mk)

b) procedure
- -scrap the superficial layer away from path anthill or manure
- -Fix soil auger and scop soil at different parts not more than 2ha
-mix the soil and get a sample (3 mks)

c) – Name of the owner
- location of the land
- History of the laud use

- Address of the owner (3x ½ =1½mks

22. a) Y- Soil profile (1mk)
b) Q- superficial layer
R- Horizon A topsoil
S- Horizon B subsoil
T- Horizon C weathered rock (4x ½ =2mks)
c)-To choose tools to be used
-To determine the crops to grow
-To determine amount of moisture held by soil/H_2O holding capacity.
- To determine drainage/infiltration (3x1=3mks)

23. a) –Resting state (1mk)
Period when viable seed is in active/cannot germinate
b) soaking
- scarification
- use dilute sulphuric acid
- Burning under soil (2x1=2mks)

24. a) PE- Is the physical relationship between input and output. (1 mk)
b) Zone 1- Underutilization of resources (1mk)

Additional unit of input return result to increased marginal output
Zone 11 – optimum use of resources Rational zone/rational (1 mk)
Zone 111 – Over utilization of input /irational (1 mk)
- Marginal output become negative

25. Napier grass
a) Seedbed preparation
- done early /during dry season
- clear vegetation /remove stums
- carry out primary cultivation
- Harrow /secondary cultivation to medium tilth
- clear all perennial weeds
- make furrow at appropriate spacing a depth

(5x1=5 mks)

b) Planting
- cutting slid have 3-5 nodes
- done early / at onset of rain /irrigate if necessary
- Elect desirable variety of Napier grass
- use healthy planting materials
- Place cuttings in furrows /hole at recommended spacing
- Cover the planting material with soil at appropriate depth

- Use cuttings /splits for planting
- Select cuttings from mature canes (5x1=5 mks)

c) Eevt application
- Apply phosphate fertilizer at planting time
- Top dress nitrogenous fert and potassium 6-8wks after planting
- Apply FYM /compost manure before planting
- Apply organic manure after harvesting (2x1=2 mks)

d) Weed control
- By cultivation
- uprooting weeds
- By using suitable herbicides

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- Inter-planting with legumes that cover the ground
- Weed control slid be done during establishment (5x1= 5mks)

e) Utilization
- practice zero grazing / cut and feed napier to an,imals
- cut drain excess foliage to conserve as silage
- Avoid direct grazing by animals (3x1 =3 mks)

26 a) Function of Agric marketing boards
- Carrying out advertising of farm product to increase demand
- Providing capital /finances to carry out agric activities
- Storage of farm produce after harvesting to minimize losses and as marketing storage
- Selling farm produce on behalf of the farmers
- Transportation of farm produce to the areas of consumption
- Packing farm produce to reduce storage space and make transportation easier
- Processing farm produce to provide a variety increase their value and prolong shalf life
- Grading farm produce to provide uniform standards and cater for various consumes
- Assembling farm produce from scattered areas of production for bulking and transportation
- Protection of farm produce from damage by use of chemical/ becoming risk
- Buying farm produce from producers
- Gathering , analyzing interpreting market information to determine appropriate market price

½ mk for listing
½ mk for expanding
20x ½ =10 mks

b) Role of Agricultural co-operatives
- co-operators pool their resources together to buy expensive machinery e.g tractor for use by members
- provide education /technical information to members
- provide loan to members (inputs and cash)
- Negotiate for higher prices for members
- Reduce overhead costs e.g transportation storage
- Bargain with suppliers to give discount on inputs
- provide employment for their members others
- Benefit members from lower takes charged
- market farmers produce
- Interest and pay out returns to members in the form of Dividends
- Help to negotiate for loans to members without security
- some provide banking services to its members
- provide strong bargaining power for members on policy issues

(10x1=10 mks)

27. a) Title 1
Axes 2x1= 2
Plotting - 2x ½ =1
Curves - 2
(6 mks)

ii) - Equilibrium (1mk)
iii) ± 22.50 (1mk)
iv) ± 3.3 (1mk)
v) 22 (1mk)

2 x1 =2 mks

b) - population
- Income of consumers

- New inventions
- Taste and preference of the individual
- Price of substitute commodities
- Price expectations
- Advertisement
- culture and social value
- Price of commodities having faint demand

(5x1=5mks)

c) –Extension and training

- Banking services
- Artificial insemination service
- Agricultural Research organization
- Farm input supply service
- Marketing outlets

(5x1=5mks)