KENYA NATIONAL EXAMINATION COUNCIL
REVISION MOCK EXAMS 2016
TOP NATIONAL SCHOOLS

KAPSABET BOYS HIGH SCHOOL
AGRICULTURE
PAPER 1
MARKING SCHEME

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KAPSABET BOYS HIGH SCHOOL KCSE TRIAL AND PRACTICE EXAM 2016

AGRICULTURE

PAPER 1 443/1

MARKING SCHEME

1. **Removal of extra banana suckers pyrethrum and coffee suckers**
   (a) Banana stool management
   (b) Cutting back in pyrethrum
   (c) De – suckering in coffee
2. **Three properties of phosphatic fertilizers**
   - Sparingly soluble in water
   - Have a residual effect in soil
   - Not liable to leaching
   - Have a slight scortching effect 3 x ½ = (1 ½ mks)
3. **Two physical properties of soil on crops.**
   - Soil texture
   - Soil profile / depth
   - Soil structure 2 x ½ = (1mk)
4. **Four ways of classifying crop pests**
   - Mode of feeding
   - Crops attacked
   - Stage of development of the pest
   - Stage of growth of crop
   - Scientific classification
   - Level of damage
   - Habitat / where they are found 4 X ½ (2mks)
5. **Three uses of labour Records**
   - Help in payment of wages.
   - Used in calculations of operation costs
   - Used in assessment of income tax
   - Used in calculating profits or losses. 3 x ½ = (1 ½ mks)
6. **Four advantages of overhead irrigation**
   - Water is evenly distributed over the required area
   - Less wastage of water than farrow irrigation
   - Can be practiced in slopy grounds.
   - Foliar fertilizers can be applied with irrigation water.
   - Sprinkler system can easily be moved to another place. 4 x ½ = (mks)
7. **Four books of Accounts**
   - Ledger
   - Journal
   - Inventory
   - Cash book. 4 x ½ = (2mks)
8. **Four methods for processing**
   - Primabel
   - San Merzano
   - Cal J
   - Seinz; Keny Beauty Rutgers 10x Hybrid 4x ½ = (2mks)

9. Four pastures management to enhance yields:

- Weed control
- Top dressing
- Topping
- Re. seedling
- Pest control
- Controlled grazing 4 x ½ = (2mks)

10. (a) Fertilizer Elements

- Nitrogen
- Phosphorous
- Potassium 2 x ½ = 1mk

(**b) Liming Elements**

- Calcium
- Sulphur
- Magnesium 2 x ½ = 1mk

11. Three ways by which pruning control disease

- Enhance penetrating of spray to kill vectors
- Remove infected branches
- Removes micro climate to discourage pests and disease
- Maintains field hygiene to reduce infection. 3 x ½ = (1 ½ mks)

12. Four ways of weed adaptation to environment .

- Elaborate / Extensive root system
- Ability to survive in poor soils
- Have short life cycle
- Have high competitive ability 4x ½ = (2mks)

13. Four factors that determine time of planting

- Rainfall patterns / water availability
- Growth habit of the crop
- Purpose of the crop
- Prevalence of pests and diseases
- Market demand 4 x ½ = (2mks)

14. Four factors that affect effectiveness of pesticides

- concentration of pesticide
- Weather conditions
- Persistence of pesticide
- Formulation
- Mode of action 4 x ½ = (2mks)

15. Reasons for staking tomatoes

- Production of clean fruits
- Prevent infestation by soil borne diseases
- Facilitates spraying and harvesting of the crop
- Controls incidence of disease outbreaks e.g blight 4x ½ = (2mks)

16. Five cultural methods of soil and water conservation

- Mulching
- Cover cropping
- Grass strips / filter strips
- Grassed water ways
- Planting trees. 3 x ½ = (1 ½ mks)

17. Three benefits of a land title deed

- Can be used as security to get a a loan/credit
- Encourage farmers for long term investment
- Minimize land disputes 3 x ½ = (1 ½ mks)

SECTION B:

18. (a) A = Tea
B = sugarcane
2 x ½ = (1mk)

(b)
- Oxygen supply
- Rooting medium
- Correct relative humidity
- Suitable temperature
- Suitable light intensive
- Leaf area 3 x 1 = (3mks)

19. (i) To show that soil is made of different sized particles (1 x 1= 1mk)

(ii) C= Humus / organic matter.
D = Gravel .
2 x 1 = (2mks)

(iii) Texture 1x1 = (1mk)

20. (a) Splash / Rain drop
1 x1 = 1mk

(b) soil depth / profile
Soil type 2 x 1 = (2mks)

(d) Wind
Water
Human beings
Animals

21. (a) invoice 1 x 1 = (1mk)

(b) Functions of the invoice

(i) Written by sellers to show the buyer of goods bought on credit
(ii) Confirm to the buyer the goods delivered
(iii)Reminds the buyer of date due for payments 2x1 = 2mks

22. (a) Compost manure 1x1 =(1mk)

(b) E = Dry leaves
F = Maize stalk 2 x ½ = (1mk)

(c) characteristics of manure
- Release nutrients slowly
- Bulky
- May be a source of weeds
- Provide breeding ground for pests
- Difficult to quantify nutrients contained
- Supply many nutrients to crops 2 x 1 = (2mks)

SECTION C: MARKING SCHEME

23. (a) Operations carried out when preparing land for planting grass
- Clear the vegetation using appropriate method
- Dig the land / carry out primary cultivation
- Harrow the land / carry out secondary cultivation
- Refine the tilth / carry out testiary operation to get a fine tilth. 4 x 1 = (4mks)

(b) Role of six marketing Agenies / institutions

- Itinerant traders / middlemen move with goods from place to place to sell.
- Brokers – Bring buyers and sellers together but do not handle goods
- Commision Agents : sell on behalf of producers at a free commission.
- Co –operatives – sell for their members
- Processors buy manufacture / process and sell
- Marketing Boards. Government bodies that buy from farmers and sell.
- Retailers . – Retailers sell in small quantities
- Whole sellers – Buy from farmers / processors in bulk and sell to consumers in bulk

1 correct for correct Agent 6 x 2 =(12mks)
1 correct function

(c) four benefits of land consolidation:

- Enhances proper supervision of land leading to high production
- It saves time and reduces cost of transport leading to high profit margin.
- Makes it easy to have a good farm plan for efficient utilization
- It makes it easier to carry out proper soil and water conservation for high production
- Farm mechanization is economical due t o enlarged holding.
- It makes it effective to administer Agricultural extension services under one holding.
- Makes it possible to construct permanent structure. 4 x1 = 4mks

24. (a) Management of dry been production from planting to harvesting

- Plant at onset of rains
- Plant at dept of 5 – 10cm
- Plant certified seeds
- Space at 45 – 60cm x 10 -15cm
- Use phosphatic fertilizer during planting
- Apply fertilizer at a rate of 100 – 200kg DAP/ ha. At planting
- Plant 2-4 seeds per hole / seed rate 50-60kg/ ha
- Carry out gapping
- Carry out thinning
- Provide stakes for climbing varieties
- Control pests
- Control diseases e.g anthracnose; been rust
- Uproot mature dry plants
- Gather uprooted plants and spread for further drying 10 X 1= (10mks)

(b) Factors for planting depth:

- Size of seed: Small seeds shallow depth for seeds to emerge above the ground.
- Soil moisture : high soil moisture shallow depth for germination and growth.
- Type of germination: cotyledons above the ground shallow depth to enable plant to push cotyledon above the ground.
- Soil type : clay soil shallow depth to have quick emergence of seedling above the ground.
- Possibility of pest attack: deep planting to prevent attack by pests

Correct explanation 4x1= 4mks

(c) Characteristics of crop for green manure:

- Should be leafy / highly vegetative
- Should be able to rot fast
- Should be able to fix Nitrogen
- Should be able grow in less fertile soil.

- Should be able to complete life cycle in a short time.
- Should be able to grow fast .
- Should be healthy. (5 x 1 = 5mks)

25. (a) Care and management of trees in Agroforestry

- Protection
- Pruning
- Training
- Grafting
- Weed control
- Mulching
- Watering/irrigation
- Control of pests and diseases 5 x 1 = (5mks)

(b)Benefits of using certified seeds

- They have high germination potential
- They are free from pests and diseases / healthy
- They give high yields
- They are bred true to type
- They are free from foreign materials / are pure
- They are free from physical damage 5 x 1 = (5mks)

(c) Safety precautions when using herbicides

- Wear protective clothing such as gloves over alls and boots.
- Avoid inhaling herbicides by not smoking while spraying or spray a long the direction of the wind.
- Read manufactures instructions and follow them strictly
- Avoid blowing / sucking blocked nozzles.
- Wash thoroughly immediately after handling the herbicide.
- Keep the herbicides safely out of reach of children
- Do not wash equipment used for herbicides in water sources used by animals or humans to avoid pollution
- Carry out proper disposal of empty containers to prevent environmental pollution.
- Spray when the weather is calm to avoid spray drift to unintended fields/ water sources
- Avoid chemical spillage to uninted places
- Avoid eating / handling food before washing

Equipment used should be washed thoroughly to avoid damage to crops in the subsequent operations 10 x 1 = (10mks)

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