MARANDA HIGH SCHOOL
PRE-MOCK EXAMINATIONS JUNE 2022

MARKING SCHEME

AGRICULTURE MOMALICHE EXAMS PAPER 1 443/1

SECTION A (30MKS)

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. **Basic economic concepts**
   - scarcity
   - preference and choice
   - opportunity cost 3 x ½ = (1½ mks)
8. **Four varieties for processing**
   - Ann f
   - 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
- Irrigation 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
- Some propagate vegetatively eg wandering jew
- Prolonged seed dormancy
- Wide range of ecological condition 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 agroforestry trees.
- Countuor farming 3 x ½ = (1 ½ mks)

17. Four 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
- You can lease the land out 3 x ½ = (1 ½ mks)

SECTION B

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

(b)

- Oxygen supply
- Rooting medium/rooting hormone
- 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 erosion
1 x1 = 1mk

(b) soil depth / profile

- Soil type
- Absence of cover crop
- Rainfall intensity
- Topography 2 x 1 = (2mks)

(d) Wind
Water

Human beings
Animals

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

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

(c) disadvantages 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 4x 1 = (4mks)

SECTION C: MARKING SCHEME

22. (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 tartiary operation to get a fine tilt 4 x 1 =(4mks)

(b) Precautions that should be observed during the harvesting of pyrethrum (4 x 1= 4mks)

- Avoid picking wet flowers
- Flowers should be put in woven baskets
- Avoid any form of contamination
- do not compact the flowers in the basket to avoid fermentation
- Dry the flowers soon after harvesting

(c) 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.(**6 x2 = 12mks)**

23. (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)

24. (a) Describe the procedure followed when collecting a soil sample from the field for testing in the laboratory

(5mks)

- Clear vegetation from sampling spot
- Make vertical act 1-25cm deep (crop land), 5cm pasture
- Take slice with spade/soil auger
- Put soil sample in clean polythene bag
- Repeat the 1-4 steps in 15-20 spots

- Mix sample thoroughly dry and crush
- Take sub-sample /composite sample to laboratory for testing

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)