

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 scorching 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 4 x 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 4 x 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
- 4 x 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 tertiary 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 to 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 overalls and boots.
 - Avoid inhaling herbicides by not smoking while spraying or spray against the direction of the wind.
 - Read manufacturer's 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 unintended 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)**