**Term 1 - 2025 (443)**

**MID TERM EXAM**

**FORM TWO (2)**

**TIME: 2 HOURS**

**MARKING SCHEME**

1.  **Two reasons for seed treatment of tree species before planting**

* Break dormancy.

Control pests and diseases

2. t**hree factors that determine spacing of beans**

* Type of soil
* Moisture in soil
* Species/ size of bean plant
* Machinery to be used.
* Purpose of beans

Stand in the field.

3. **Four reasons for using certified seeds for planting**

* High yielding
* Quality produce
* High germination percentage
* Grow faster.

4. **Two importance of parent’s material in soil profile**

* Determine soil characteristics.
* Determine soil depth.

Determine soil nutrients.

5. **Four ways of modifying soil temperature in crop production**

* Mulching
* Pruning
* Shading of crops
* Irrigation (4x ½ mks)

6. **Two common milk breeds of goats reared in Kenya**

* British Saaren
* The Toggenburg
* Anglo-Nubian
* Jamnapari
* The British alpine ( ½ x2=1mks

7. **Four dairy cattle breeds reared goats in Kenya.**

* Ayrshire
* Friesian
* Guernsey
* Jersey (4x ½ =2mks)

8. **Differentiate between breed of animal and type of animal. (2mk)**

* Breed-group of animals with similar characteristics and common origin.
* Type –the purpose for which the animal is kept. (2x1mk = 2mks) (mark as whole)

9. **Two roles of humus in the soil that are beneficial to crops**

* Provide nutrients.
* Increase water holding capacity.
* Increase soil temperature.

Neutral soil PH

10. F**ive activities that may be undertaken in organic farming**

* Mulching
* Apply manure.
* Use medicinal plants to control parasites and diseases.
* Crop rotation
* Rear livestock on natural organically grown pasture
* Physical/ cultural/ biological/ pests, weeds and disease control

11. **Two ways in which Agriculture contributes to industrial development.**

- Provide raw materials for industries.

- Provide market for industrial goods.

- Is a source of capital for starting industries.

12. **Four ways by which wind affects the growth of crops.**

- Causes physical damage to crops.

- Cause rapid spread of diseases/ pests/ weeds.

- Can cause water stress as a result of evaporation.

- Causes stress of crops due to chilling caused cold winds.

- Encourage transpiration hence water and mineral uptake.

- Agriculture – rearing of fish in fishponds

13. **One physical characteristic used in classifying soil is:**

* Colour,
* Texture,
* Structure

14. - Rainfall

* Soil
* Topography
* Light
* Wind

15. F**our advantages of applying lime in clay soil**

* Lower soil acidity
* Increase calcium content.
* Hastens decomposition of organic matter
* Improve soil structure/ improve drainage.
* Facilitates availability and absorption of nitrogen and phosphorous
* Improve legume nodulation and nitrogen fixation

Increase multiplication of micro- organisms

16.

* Halter
* Rope
* Nose ring and leading stick

17. **Two disadvantages of using farm yard manure**

- It’s bulky hence difficult to apply by one laborer.

- It may spread weeds.

- It may spread diseases.

- It releases nutrients slowly.

18. **Four factors which influence the stage at which the crops are harvested.**

- Purpose of the crop / maturity.

- Moisture content.

- Concentration of certain chemicals.

- Water condition.

- Market demand.

19 (a) Lacks one of the major fertilizers NPK elements

(b) – The soils could be very acidic

- Too much rainfall.

20. Fertilizer ratio is the proportion of various nutrients in a fertilizer grade is the percentage of nutrients in a fertilizer.

(b)- Nitrogen

- Calcium

- Potassium

- Magnesium

- Sulphur

21. Area

Spacing

Tea population (10,000x2

1.5mx 0.75) 1

20,000m²

1.125m² 1

= 17,777 plants

Needed in carbohydrate metabolism.

22. **Four reasons why training is important in some crops**

* Facilitate field practices of spraying and harvesting.
* Improves crop quality by preventing solving.
* Enable crop grow in the required direction.
* Improve yield
* Control pest and diseases

23. **Four factors that influence the depth of planting are:**

* The size of the seed
* Soil moisture content
* Type of soil /soil texture
* Type of germination
* Agriculture – rearing of fish in fishponds.

**SECTION B**

24. i) Stir up pump/ bucket pump

ii) Spraying livestock with acaricide

iii) A – Nozzle B – lance handle

iv) A – Atomizes the acaricide into spray

B – Direct the nozzle to the parts to be sprayed

25. a) i) A – Drop/ trickle irrigation

ii) B – Sprinkler/ overhead irrigation

b) Two advantages of method A over method B

* Conserves water
* Does not damage flowers, leaves.
* Does not cause splash/ splatter irrigation.
* Does not encourage spread of fungal diseases from crop to crop.
* Does not encourage the growth of weeds all over the field.
* Agro- chemical can be dissolved in the water and directly applied to the crop

c) i) Cotton wool

ii) Rough sand

26. a) The quality of sulphate ammonia fertilizer the farmer will need for 10 hectares (1mk)

100kg SA supplies 21kg N

1ha requires 150kg SA

10ha requires (150x10) kg SA

= 1500kg SA in 10ha

b) The number of 50kg bags of fertilizer he will purchase (1mk)

50kg fill 1 bag.

1. 1 x 1500=30bags (1)

50

27. a) Stem cutting

b)

* High yielding
* High quality
* Good rooting ability
* Adaptable to the ecological zone

c)

* Make top cut near the auxiliary bud as close as possible and sloping away from it
* Lower cut must be sloping at an angle and be 2.5 – 4cm below the leaf
* Single leaf internodes cuttings must be kept shaded and wet floating in water from the time of cutting to planting.

**SECTION C**

28 (a).  **Factors to consider in timely planting of annual crops.**

* Escape from serious weed competition.
* Utilization of early rainfall.
* Exploitation of Nitrogen flush in the soil that has accumulated during dry season.
* Escape from serious pest + disease attack e.g., stalk borer in maize.
* Fetch high market prices when harvested early.
* Reduce competition for labour during labour peak period.
* For harvesting season to coincide with dry period to reduce losses e.g., cotton.

Early planting means early farming/calendar for the farmer to enable him /her to finish up other farm activities; (8x1=8mks)

(b). **four ways of preparing planting materials before planting**

* Breaking seed dormancy
* Seed dressing
* Chitting
* Seed cleaning
* Seed inoculation

Root trimming as in banana or tree seedlings

29 (a) **Stage I: Filtration of water intake**.

- Water from source river is made to pass through a series of sieves.

- Large particles of impurities are trapped by the sieves.

- Water then enters the large pipe to be directed to the mixing chamber.

**Stage II: Softening of the water.**

* Water circulates in the mixing chamber and doses of soda ash to soften the water.

**Stage III: Coagulation and sedimentation**

* Water is passed through coagulation tank where fresh air enters to remove bad smell/ chloride of lime used.
* Water stays for 36 hours thus solid particles settle and bilharzias causing organisms killed.
* Alum added to coagulated solid particles which settle at the bottom.

**Stage IV: Filtration**

* Water is passed through filtration tank with layers of sand and gravel to filter it.
* Water leaving the filtration tank is clean.

**Stage V: Chlorination**

* Water is passed through chlorination tank where chlorine is added.
* Micro-organisms in the water are killed by chlorine.

**Stage VI: Storage**

- The treated water is stored in large overhead tanks before distribution and use.

Enable controlling overbearing by ensuring required leave ratio.

(b) Open up canopy for air and light penetration

* Reduce chemical waste.
* Control pests and diseases
* Allow other field operation.

Give crop desired shape.

(c) – To determine the nutrient status of the soil.

- To determine the soil PH/type of fertilizer to add to the soil/lime to add to the soil.

- To determine the type of crop to grow.

- May help in diagnosing low crop yield/mineral deficiency.