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**AGRICULTURE PAPER 1  
MARKING SCHEME**

**TRIAL ONE EVALUATION TEST - 2019  
AGRICULTURE PAPER 1 MARKING SCHEME**

1. Egg production / weight gain.  
Labour records  
Feeding records  
Health records  
Market records  
Inventory records.
2. Low nutritive value per unit volume/weight.  
Likelihood of spread of disease/pests/weeds.  
Bulky / difficult to store / transport/ apply  
Loses nutrients if poorly stored.  
Difficult to quantify the amount of nutrients/ unit volume.
3. Ensures maximum utilization of nutrients.  
Controls build up of pests/ disease/ control  
Controls weeds that are specific to particular crops.  
Improves soil fertility when leguminous crops are included.  
Improves soil structure.
4. Type of crop to be established/ size of seed.  
Moisture content of soil.  
Type of soil  
Conditions of land after primary cultivation/ implements used for primary cultivation  
Amount of organic matter on the surface.  
Vulnerable to soil erosion/ slope of the land/ topography's.
5. Tree felling  
Stumping / removal of stumps / destumping.  
Slashing mowing.
6. Require little land.  
Quick accumulation of manure.  
Easy to control diseases and parasites.  
Less wastage of feeds  
Has high stocking rate

High milk yield  
Efficient use of fodder

7. Intended use of the crop  
Chemical concentration of the produce / stage of maturity / change in colour  
Prevailing weather conditions.  
Market demand for the produce / market price.
8. The crop seedlings are delicate and need great care.  
Bulking up of planting materials is necessary like sugarcane.  
Nursery helps to select the healthy and seedlings  
When cuttings to propagate the crop need special treatment.
9. This is the dressing of legumes with nitro-culture in order to improve nitrogen fixation in the root nodules.
10. Occurrence of blossom end rot disease  
Delayed maturity of plants.  
Fruits crack when young  
Grow more vegetative parts and produce less fruits.  
Scorching effects on leaves.
11. Detaching soil particles on the surface.  
Transferring the soil particles in splashes.
12. Species of forage crop  
Stage of harvesting.  
Drying period  
Weather conditions  
Storage
13. Cleaning the store  
Proper drying of beans  
Making store vermin proof.  
Use of traps/ physical destruction  
Use of cats / biological
14. For easy transplanting.  
Root system is not disturbed during transplanting  
Can be carried over a long distance  
Seedlings can easily be stored before planting.
15. To increase production

Reduce incidence of banana weevils.  
Materials removed acts as mulch.

16. Add nutrients e.g Ca to the soil.  
Modifies soil Ph  
Modifies soil structure.

17.

18. Clear the land  
Plough the land deeply using tactors  
Harrow to a fine lith  
Level the land  
Construct bunds around the plot.  
Puddle the soil to produce a fine mud.

### SECTION B

19. (a) X irish potato tuber/set.  
Y sugarcane cutting / set.

- b) Chitting  
c) Burn sugar fields to chase away vermines  
Deliver the cane within 24hrs to maintain quality.

20. (a) Couch grass / digitaria scalarum.

- (b) Presence of underground stems/ rhizomes which are difficult to control/ underground storage structure.  
(c) uprooting  
Cultivation  
Slashing.

21. (a)  $120 - 112 = 08$  grams

- (b)  $112 - 106 = 6$  grams

$$\frac{6}{120} \times 100 = 5\%$$

(c)  $\frac{8}{6} = 1\frac{1}{3}$  times

- (d) Crop rotation  
Minimum tillage  
Liming

Use of manure  
Drainage water logged soils  
Leaving land fallow.

22. a) Cutworm.

b) Early planting for crop to establish early and outgrow the pest.  
Application of appropriate insecticide / chemicals.  
Field hygiene to prevent transmission from previous crop residues.  
Physical killing and destruction.

23. (a) (i) at on set of rains

Delay planting in long rains.  
Place 2 or or 3 seeds hole.  
Apply DAP/ Phosphate fertilizer  
Seed rule is 50-60kg or one teaspoonful per hole.

(ii) Weeding

Irrigation  
Pest control  
Disease control  
Gapping  
Thinning.

(iii) Drying

Threshing  
Winnowing  
Sorting  
Dusking  
Package.

(b) Adaptability – should be adapted to local ecological condition.

Physical deformities/ damage: should be free from physical deformities / damage.

Health- should be free from pests and disease.

Viability / germination percentage: should have high visibility germination percentage

Parent plant should be form high yielding / healthy / high quality / early maturity.

Purity – should be clean/ free impurities

Maturity – should be of correct maturity stage.

Age/ storage period: seeds stored for long periods have low viability/ germination percentage.

24. (a) Lack of ground cover exposes soil to agents of soil erosion / removal of cover exposes soil to agents of soil erosion/ removal of cover crops.

Steep slopes increase the speed of surface run-off hence erosive power of water.

Light / sandy soils are easily carried away by agents of soil erosion.

Shallow soils are easily saturated with water and carried away.

High rainfall intensity on bare ground/ leads at detachment of soil hence run off.

Frequent cultivation/ over cultivation pulverizes the soil making it easy to detach and carry away.

Overstocking leads to overgrazing which destroys ground cover exposing it to agents of erosion.

Ploughing up and down the slopes creates channels which speed up and increases the erosive it to agents of water.

Cultivation of river banks destroys riverine (viparia) vegetation and destroys soil structure exposing it to agents of erosion.

Cultivating the soil when too dry destroys soil structure making it easy to be eroded.

Long slopes increase volume speed of run off hence increasing erosive power of water.

High rainfall amount increase saturation of soil erosion.

(b) Mulching of conserve moisture.

Erection of shade to minimize evapotranspiration.

Weed control to reduce competition with seedlings for nutrients , light, space et.c

Pest and disease control to ensure healthy and vigorously growing seedlings

Pricking out/ thinning to minimize competition for growth elements.

Fertilizer application to supplement nutrients in the soil.

Watering to ensure adequate moisture supply.

Hardening off/removing shade/ reducing watering to acclimate the seedling to conditions in the field.

Removing of mulch immediately after germination.

25. (a) Land tenure is the mature of the right to own and use land while land reform is any deliberate organized action with the purpose of improving land ownership and land use.

(b) (i) Shifting cultivation – individuals own several pieces of land in the process of clearing and shifting to new ground after soil eschaustion.

(ii) Customary law of land ownership – land is fragmented to several pieces to facilitate inheritance by the heirs.

(iii) Population increase – people are focused to buy several pieces of land in different places due to population pressure in their area.

(iv) Accumulation of land by money lenders – private money leaders accumulate land/ repay themselves with pieces of land if an individual farmer is able to pay back the debt.

(v) Traditional use of land – land may be offered to settle debts and as present to newly weds and others. This makes an individual to have several fragments.

(c) (i) Time wasting travelling around scattered fragments of land.

(ii) Difficult to provide proper and effective weed, pets and disease control measures:

(iii) Difficult to develop and follow a sound farm plan;

(iv) Difficult to supervise the scattered fragments

(v) Livestock disease and parasites are hard to control due to constant movement.

(vi) Soil conservation measures are difficult to carry out.

- (vii) Restricted grazing in one holding is not possible due to overstocking, leading to land Degeneration and demidation .
- (viii) Difficult to make use of Agricultural existence advice since the fragments are not easily Reached.
- (ix) Results to low productivity leading to low standards of living.