AGRICULTURE

PAPER 1 MARKING SCHEME.

1.

* Olericulture
* Pomoculture/ pomology
* Floriculture. (3 x ½ = 1½ marks )

2.

* Light duration
* Light wave
* Light intensity (3 x ½ = 1½ marks)

3. (a) Practice of growing crops and keeping livestock in the same piece of land at the same time. (1mark)

(b)

* Requires high level of management.
* Labour intensive
* If not well confirmed, livestock can damage crops (3 x ½ = 1½ marks )

4.

* Use of heavy machinery on wet soil
* Ploughing at the same depth continuously. (2 x ½ = 1marks )

5.

(i) Because nitrogenous fertilizers are hygrocopic i.e. to absorb moisture from the atmosphere.

(ii) Because they are highly volatile i.e. change into gaseous form in dry conditions and escape.

(iii) Because they are easily leached behold root zones of crops.

(iv) Because they have a short residual effect. (4 x ½ = 2 marks)

6.

* Sieving methods using various sizes.
* Seiver / mechanical methods
* Sedimentation method. (2 x 1 = 2 marks )

7.

* Hand picking and killing
* Use of appropriate pestcide (2 x 1 = 2marks )

8.

* It can lead to rotting
* It promotes aerobic respiration which can result in loss of nutrients.

(2 x ½ = 1 mark )

9.

* Uprooting
* Us of herbicides
* Cover cropping
* Slashing (3 x ½ = 1½ marks )

10.

* Reduces land disputes
* It is official prove / security for loan
* Encourages farmers to carry out long term investment on the land.

(4 x ½ = 2 marks )

11

* More palatable than pure grass
* Reduces soil erosion
* Has better weed control effect
* Increases soil fertility because of nitrogen fixation
* Economy in use of fertilizer
* Better distribution of growth
* Makes maximum use of soil nutrients
* More nitration’s
* Tighter yields per unit area of land.
* Security against tatol loss due to attack by pest. (4 x ½ = 2 marks )

12.

* Weeding
* Re – seeding
* Fertilizer application
* Topping
* Mixing with legumes. (4 x ½ = 2 marks )

13.

* Gentle slope
* Nearness to permanent source of water
* Well secured place
* Fertile soil
* Well sheltered place. (4 x ½ = 2 marks )

14.

* Early maturity of the crop
* Plants assume desired size and shape
* Possible to obtain two more varieties of oranges on one rootstock.
* High yielding
* Maintains parental genetic characteristics
* Possible to propagate seedless orange varieties (4 x ½ = 2 marks )

15. (a) A micro catchment is a rainwater harvesting system which involves the collection of runoff water for productive use. (1 x 1 = 1mk)

(b)

* Control bunds
* Contour ridges
* Semi-circular bunds
* Trapezoidal bunds
* Contour –stone bunds
* Permanent rock dams
* Water spreading bunds (4 x ½ = 2 marks )

16.

* Bacterial blight of coffee
* Bacterial wilt of potatoes
* Bacterial wilt of tomatoes
* Black arm of cotton
* Clack rot of cabbage
* Halo bright of beans. (4 x ½ = 2 marks)

SECTION B

17.

(a) Chitting (1mark)

(b) (i) B (1mark)

(ii) Presence of sprouted auxiliary buds (1mark)

c)

* extra support
* prevent lodging
* Proper nutrients utilization by the roots. (1mark)

18.

(a) Size of land 10 hectares

(SA suphate of ammonia 20% N

Route of 1500/= per bag (50 kg)

1ha - 120kg

10ha 120 x 10 = 1,200kgs

1200kg /50 = 24 bags (3marks)

(b) 1500 x 24bags = 36,000/= (2marks)

19. (a) splash / rain drop erosion. (1marks)

(b)

* High amount and intensity of rainfall.
* Slope of land (topography/ sleep slope)
* Type of soil
* Shallow soil depths
* Lack of vegetation cover
* Clean weeding (2 x 1 = 2marks)

(c)

* Exposes shallowly planted seeds
* Hollow cut soil exposing underlying layers. (2 x 1 = 2marks)

20.

(a) To test presence of living organisms in the soil. (1marks)

(b) To kill all living organisms.

(c) To remove moisture. (2 x 1 = 2marks)

(c) Lime water turned milky due to carbon dioxide produced by living organism in fresh garden soil. (1mk)

H- Limewater remained clear with no noticeable change (1mk)

21. (a)

* Timely planting.
* Proper tillage
* Close season
* Trap cropping
* Planting resistance crop varieties
* Field hygiene
* Alteration of environmental conditions,
* Destruction of alternate host.
* Proper spacing
* Uses of organic manure
* Irrigation (1 x 10 = 10marks)

(b.)

* Type of soil
* Type of crop to be grown
* Source of water / quality of water
* Size of land to be irrigated
* Capital available
* Topography of land
* Profitability /viability of enterprises. (1 x 5 = 5marks)

(c)

* High yield
* Resistant to pest
* Resistant to diseases
* High quality produce
* High rooting ability
* Early maturing (1 x 5 = 5marks)

22. (a)

* Crop depth ; deep rooted crops alternate with shallow rooted
* Weed control - crop of same families alternated
* Pest and diseases control - with different families to break cycles;
* Soil fertility – heavy feeders alternated with shallow / lighter feeders
* Soil structure; grass leys included at the end of programme to improve soil structure.

(5 x 2 = 10 marks)

(b)

* Plucked tea leaves should be put in woven baskets to allow free air circulation to prevent fermentation.
* Keep plucked tea cool and shaded place
* Plucked tea should be delivered to the factory the same day.
* Plucked tea should not be compressed to prevent heating up and browning lowering quality

(c)

* Increase soil aeration
* Increase soil volume
* Raise soil temperatures
* Increase microbial activities
* Reduce soil erosion
* Remove toxic substances.

23. (a)

* Altitude - 2100MA sea level
* Rainfall 100mm P.a
* Irrigation during dry period
* Soil should be fertile, well drained soil ph 6.0 - 7.0
* Temperature - warm hot climates core suitable. (3mks)

(b)

* Land preparation

Cultivate the land during dry period and is prepared to a fine titth

Remove all for good start

Apply phosphate fertilizer at rate of 250kg.ha. (4marks)

(c)

Harvesting

Breaking the tops quickens withering. (1mk)

(e)

Thrips; onion fly ; leaf minor

23. (ii)

* Crop rotation - makes maximum utilization of soil nutrients.
* Control of soil erosion - soil erosion carry’s the top fertile soil.
* Application of organic manure
* Planting leguminous , crops to fix nitrogen in soil.
* Control of weed – weeds compete with crops for nutrients
* Planting cover crops - help to prevent soil erosion.