**MAKING SCHEME MJET FORM 3 AGRICULTURE PP1 TERM 2 2017**

1.

* Mutual benefits between plants and animals
* provide insurance against total failure
* economic use of labour in the farm
* continuous flow of cash from both enterprises 4x½=2mks

2.

* food supply
* capital
* market for industrial goods
* foreign exchange
* source of raw materials
* employment 4x½=2mks

3.

* increase rate of evapotranspiration
* causes lodging of crops
* causes soil erosion
* spread of pests and diseases
* destroy farm structures 4x½=2mks

4.

* reliability
* distribution
* amount
* intensity
* form of rainfall 4x½=2mks

5.

* Sub soiling
* rolling
* leveling
* ridging 3x½=1½mks

6.

* Reduce cost of production
* Conserve moisture
* Reduce soil erosion
* Saves time and labour
* Maintain soil structure
* Minimizes damage of crop roots 3x½=1½mks

7.

* Determine type of crop to be grown
* Influences availability of plant nutrients in the soil
* Determine presence and activity of soil micro-organisms
* Influences soil structure 3x½=1½mks

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a)

* To introduce micro-organisms in the compost for decomposition.

b)

* Highly vegetable/ leafy
* Leguminous/highly proteinous
* Easily decomposed 4x½=2mks
* Hardy/survive in difficult conditions
* Fast growth rate.

9.

* Ensures maximum use of available rainfall
* Crops evade serious crop pests
* Crops compete with weeds effectively 4x½=2mks
* Crops benefits from nitrogen flush available at beginning of rain
* Ensures early harvesting thus fetching more market prices

10.

* Shelling
* Drying
* Processing
* Sorting
* Clearning /winnowing 4x½=2mks
* Dusting with chemicals
* Packaging

11.

* Crop rotation
* Timely planting
* Use of clean seeds
* Proper spacing 4x½=2mks
* Clean seedbed

12.

* Leaching
* Soil erosion
* Mono-cropping
* Continuous cropping
* Change in soil PH
* Accumulation of salts
* Burning of vegetation 4x½=2mks

13.

* The title number
* Size of land
* Name/identity number of the owner
* Type of ownership
* Rate of issue
* Seal and signature of the issuing officer 4x½=2mks

14.

* There is proper supervision of land under one holding
* Saves on transportation cost
* Extension officers can provide advise
* Possible to make a sound farm plan
* Fencing and permanent structures can be made
* Economical to operate land under a single unit 4x½=2mks
* Long term enterprises can be undertaken.

15.

* Improve the soil structure
* Increase microbial activities
* Acts as PH buffer
* Add nutrients into the soil
* Remove soil toxins
* Increase water holding capacity
* Moderate soil temperature/ raise soil temperature 5x½=2½mks
* Food and shelter for soil micro-organisms
* Improve soil structure

**SECTION B**

16.

a) A- rain drop erosion

 B- Rill erosion 4x½=2mks

 C - Sheet erosion

 D - Gully erosion/u-shaped

b) Bareness of land 2x½=1mk

 Type of soil

 Rainfall intensity

c)

* mulching
* cover cropping /planting tress
* use of manure/ organic matter

 2x½=1mk

d) Loss of soil nutrients

-deccrease in particle aggregation 1x1=1mk

17. a) Datura

* F - Mexican marigold/tagetesminuta 3x½=1½mks

 G – Blackjack/Bidenspilosa

b) Epoiaonous to livestock

 F- taints milks

* G- sticks onto the wool in sheep lowering quality 3x½=1½mks

C) i) produce a lot of seeds

 ii) well established rooting

-fast uptake of nutrients

 iii) fast growth rate

* Does well in poor soils 2x1=2mks
1. ) H- sandy soil
	1. J-Loam soil 3x½=1½mks

K-Clay soil

b) Soil H/sandy soil

c) It is well drained/let more water to pass through it as opposed to others./because the level of water that has collected in the cylinder is higher than in the other cylinders.

d) Soil k /clay soil

e) Because it not easily drained/ does not loose water easily when flooded, for growing rice.

19 a)M- bare root nursery/direct nursery 1mk

 N- Containerized nursery 2x½=1mk

b) i) cheaper to establish

 ii) Less laborious

 iii) Takes less space 2x½=1mk

c) i) require less water

 ii) Higher survival rate after transplanting

 iii) Produce seedling with well-formed roots

 iv) Less root damage during transplanting

 v)Easy transport 2x1=2mks

d) hardening off

 root pruning

**SECTION C (40MKS)**

20.(a)landlords who cannot use the land, get income after remting

* idle land is put into agricultural use by tenants
* landless can rent land from landlords to earn livelihood
* land disputes are reduced
* ensures equitable distribution of land as a natural resource 5x1=5mks

b)

* growth habit
* size of the crop
* moisture availability
* purpose of crop
* soil fertility
* machinery to be used
* size of plant. 5x1=5mks

c) Number of seeds per hole

* grass stups/ filter strips- Reduce speed of running water.
* cover cropping- provide soil cover which reduce impact of rain-drops
* rotational grazing- prevents overgrazing
* contour farming – reduce the speed of runoff
* mulching- prevent splash erosion
* intercropping- provide adequate ground cover
* strip cropping hold soil particles together.
* use of grassland water ways- help slow down the speed of water.
* afforestation/ re afforestation. Agroforestry.-reduce speed of water and slow impact of water. 5 x2=10mks

21.

a)

* temperature – cool condition
* rainfall -750-200mm per annum
* soils; deep, fertile well drained
* altitude- 900-1500m above sea level 4x½=2mks

b)

* watering – should be done twice a day
* mulching- a light mulch should be applied then removed as soon as seedling start to emerge
* shading- a shade should be erected over the seedling
* weed control – should be kept free of weeds by uprooting
* pest and disease control
* hardening off- 2-3 weeks before transplanting by reducing watering and partial removal of shade.
* pricking out-overcrowded seedling should be targeted to a seedling bed. 6x1=6mks

c)

* seedling are ready for transplanting 1 month/4-5 true leaves/ when 15cm high
* healthy and vigorous growing seedling are selected
* seedling should be lifted with a lump of soil around the roots.
* Nursery bed should be watered first for easy lifting
* Seedling should be planted at the same depth as they were in the nursery
* Transplanting is done late in the evening during or cloudy day 5x1=5mks

d)

* Weed control- keep field clean always
* Pest control- aphids, cutworms, mites are controlled by appropriate method
* Gapping – done for the dead seedlings
* Topdressing- use nitrogenous fertilizers
* disease control
* watering 5x1=5mks

e)

* The heads are cut when they are 3-4 months after transplanting, the heads are cut when they are solid and compact. 2x1=2mks

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* Correct spacing – this will deny space for active weed growth
* Mulching – smothers weeds
* Flooding – used to control non- aquatic weeds in paddy rice.
* Early planting – gives the crops ample time to establish early and smother weeds
* Application of manure and fertilizers – encourage faster plant growth
* Crop rotation – break life- cycle of parasitic weeds
* Clean seedbed – proper land preparation to minimizes
* Cover cropping – helps to smother weeds. 5x2=10mks

b)

* Damage leaf tissue, reducing surface area for photosynthesis
* Some pests transmit pathogens
* Pests cause wounds on crops which may result to secondary infections
* Some pests damage plant roots resulting to wilting
* Some pests such as squirrels unearth sown seeds
* Pests destroy buds and shoots/ growing points
* Sucking pests deprive the plants of its cell sap, resulting to retarded growth.
* Destroy seed embryo lowering seed viability
* Some pests inject toxic substances which cause death of plant tissues
* Pests reduce the demand of a crop produce by lowing quality
* Some pests attack berries, fruits and flowers lowering quality and quantity.
* pests reduce the demand of a crop produce by lowering quality
* Some pests attack berries fruits and flowers lowering quality and quantity.