**POST MOCK 2019 -September**

**AGRICULTURE**

Form 4

Paper 1

**MARKING SCHEME**

**SECTION A 30 MKS**

**1 a) Four characteristics of extensive farming system**

1. Practiced on large tract of land
2. Low capital investment
3. Low labour requirement per unit area
4. Low yields per unit area. 4x ½ =( 2mks)

**b) Disadvantages of small scale farming. 2x1 (2mks)**

1. the yields of produce are low
2. it offers less employment opportunities compared to large scale farming
3. it may be difficult to market farm produce because of middlemen
4. it does not enjoy economies of scale as it practiced on small land sizes

**2. Two ways in which predators affect agricultural production.**

1. some predators help control pests by feeding on them
2. -predators that kill livestock impact negatively on agriculture. 2x ½ mks (1mk)

**3. Factors that influence soil formation. 4x ½ mks (2mks)**

1. parent rock material
2. climate
3. -topography
4. time

**4. Farming practices that bring about minimum tillage. 2x ½ (1mk)**

1. application of herbicide on controlling weeds
2. -use of mulch on the soil surface
3. -timing cultivation
4. -establishing a cover crop on the field
5. uprooting or slashing weeds in perennial crop.

**5** a) Alum to coagulate solid particles

b) soda ash – for softing water being treated 2x ½ (1mk)

**6. Importance of organic matter 2x ½ (1mk)**

1. Improves soil fertility
2. encourage microbial activities in the soil
3. Improves water infiltration etc

**7. Reasons why green manure is not commonly used. 3x ½ (1 ½ mks)**

1. most of crop grown are food crops hence hard for farmers to use them as green manure
2. most of nutrients are used up by micro-organism in process of decomposition
3. it takes long for the green manure crop to decompose.

**8. Uses of farm records.**

1. they show the history of the farm
2. help to detect losses or theft on the farm.
3. make it easy to share profit and losses in partnerships
4. helps to settle disputes among heirs 4x ½ (2mks)

**9. Importance of phosphorous in crop growth**

1. development of roots
2. stimulates nodulation
3. essential in cell division
4. strengthens plant stem
5. hasten crop maturation 3x ½ = 1 ½ mks

**10. Significance of using seeds as planting materials**

1. seeds are easy to treat against soil borne pest and diseases
2. they are not bulky hence easy to store
3. easy to use machines while handling them
4. possible to develop new varieties
5. easy to handle during planting 4x ½ =2mks

**11. Importance of tissue culture in crop propagation**

1. it is used in the mass production of propagules
2. it is fast and requires less space
3. easy to recover and establish pathogen free plants

**12**. Rogueing- is the uprooting and destroying of infected plants

Gapping- is the filling up or replacement of the dead seedling

**13. Effcets of excess nitrogenous fertilizer.**

1. prolonged maturity
2. cracking of fruits before maturity
3. blossom end rot
4. too much vegetative growth hindering fruit formation 4x ½ =2mks

**14. Disadvantages of communal land tenure system.**

1. no individual has the responsibility of taking care of the land or develop it
2. no incentive to manage and develop the land
3. poor yields
4. poor stock breeding programme
5. poor control of pest, parasite and diseases 4x ½ mks= 4mks

**15. Precautions farmers should take when using agro chemicals**

1. read manufacturer’s instruction and follow them
2. farmer should wear protective clothing
3. avoid inhaling the herbicide
4. the farmer must bath thoroughly after handling chemicals
5. the farmer must not blow or suck blocked nozzles. 4x ½ =2mks

**16. Harmful effects of pests on crops**

1. they damage crops hence low yields
2. destroy crop leaves lowering photosynthesis
3. result to retarded growth of crops
4. lowering the quality and quantity of produce
5. transmit most of crop diseases etc 3x ½ =1 ½ mks

**17. Qualities of a good manager in a farm. 3x ½ =1 ½ mks**

1. should be knowledgeable on agricultural principles
2. hard working and time conscious
3. should be flexible in decision making
4. should have practical farming skills
5. should be responsible, dynamic prudent, competent and ambitious.

**18. Factors that influence the demand of a commodity. 2x ½ =1mks**

1. -population
2. -income
3. -price of related goods
4. -advertisement
5. -level of taxation
6. price of expenditure
7. preference and taste
8. -beliefs, customs and taboos

**SECTION B 20 MKS**

19 a) i) coppicing

ii) Pollarding 2mks

**b) Sites for agro-forestry trees in the farm.**

1. boundaries
2. riverbanks
3. Terraces
4. slopes
5. homestead 4x ½ =2mks

20 a) ledger book 1mk

**b) Importance of keeping proper farm accounts records**

1. helps to manage income and expenditure
2. helps to know which enterprises are financially worth while
3. help in working out the value of the farm
4. important when seeking credit facilities
5. help in comparison of farm enterprises
6. help in proper planning of the farm. 4x ½ =2mks

21. a) J -maize weevil

K -quelea /Sudan dioch

L- Americanbollworm

**b) two ways of controlling pest labelled L**

1. use of appropriate pesticide
2. -crop rotation 2x1=2mks

c) J maize, wheat, rice etc

K rice, sorghum 2x1=2mks

22. a) X double thorn

Y nut grass

Z coach grass 3x1 =3mks

b) i) X irritate the workers

ii) Z presence of underground rhizomes 2x1 =2mks

c) M datura is poisonous to livestock and human

**SECTION C 40MKS**

**23 a) Cultural methods of weed control**

1. mulching
2. cover cropping
3. crop rotation
4. timely planting
5. use of clean planting materials
6. proper spacing
7. clean seed bed
8. flooding
9. proper fertilizer placement 5x2=10mks

**b) factors considered when siting a nursery bed.**

1. -nearness to the water sources
2. -type of soil
3. -topography
4. -previous cropping
5. -security
6. -well sheltered place explained 5x2 = 10mks

**24 a) ways in which farmer may adjust to uncertainty and risks**

1. Diversion
2. Selecting more certain enterprises
3. Constructing
4. Insurance
5. Input rationing
6. Adopting in production
7. Flexibility in production methods 5x2 = 10mks

**b) physical methods of controlling crop pest**

* 1. use of lethal temperature
  2. suffocation
  3. –flooding
  4. physical destruction f pest
  5. proper drying of produce
  6. use of scarecrows
  7. use of physical barriers
  8. use of electromagnetic radiation 5x2=10mks

**25 a) Information contained in tittle deed.**

1. number of the title
2. size of the land
3. the name and identity number of the ownership
4. type of ownership eg absolute, leasehold or free hold
5. condition of ownership if any
6. seal and signature of the issuing officer
7. date of registration 5x1 =5mks

**b) methods used to control soil and water pollution**

1. fencing water sources
2. enforcement of laws to those who pollute water
3. planting grass along the river banks
4. employing adequate storm control methods and disposal systems especially in areas with heavy rainfall
5. controlling erosion 5 x 1 =5mks

**c) Ways used to improve labour productivity in a farm.**

1. training
2. farm mechanization
3. improving terms and conditions of service
4. labour supervision
5. assigning the workers according to their skills.
6. Giving incentives to the workers 5x2 = 10mks

THE END