MWAKICAN JOINT EXAMINATION

FORM 2 AGRICULTURE MARKING SCHEME

TERM 2 2015

**SECTION A (30MKS)**

1. Health - a state in which all the body organs or parts and systems are considered normal and are functioning normally. 1mk
2. Symptoms of potassium deficiency

-leaf curling

-leaf surface loses chlorophyll and becomes yellowish that is they become chlorotic

-premature leaf fall

-stunted growth

-the edges of the leaf are scortched while the central parts remain green.

4x1/2 = 2mks

3. **Information contained in composite samples**

-name and addr**ess of the farmer**

**-field nu**mber

- date of sampling 3x1/2 =11/2 mks

**4 Disadvantages of using vegetative propagation**

* Vegatitive propagation does not result in new crop varieties
* Keeping the materials free from diseases is difficult
* Materials cannot be stored for long
* The materials are bulky and therefore difficult to transport 4x1/2 =2mks

**5. calculation**

Plant population – area of land

Spacing of crops

Area of land = 800x 600

75x25

= 256 plants 3mks

6. **Differnces between monocropping and intercropping**

Monocropping is the practice of growing one type of crop in a farm or one piece of land while intercropping is the practice of growing two or more crops in the same field at the same time 1mk

7.,**Rogueing** – uprooting and destroying of infected plant to prevent disease spread 1mk

**Gapping** -filling or replacement of the dead seedling in the farm 1mk

**8 Disadvantages of using non. Capped multiple stem pruning.**

-breaking of stems and branches

-difficulty in gathering the berries from top points

-difficulty in spraying the tall bushes

-rotting of stumps with age 4 x1/2= 2mks

9.**Good grain store**

**-Rat or vermin proof**

-well ventilated

-easy to load and offload

-well secured to minimize theft 4x1/2 =2mks

10**.Intermediate host for**

**a) Taenia Solium ……**pork  **1/2**

**b)Taenia sagnata,,,,,,**beef  **1/2**

**c)liver fluke…………**fresh water snails **½**

**11 control measures of tse tse fly**

-bush clearing in order to destroy the breeding places of the flies

-spraying their breeding places with suitable insecticides

-use of fly traps with impregnated nets

-use of sterising agents eg radio isotopes on male flies and then releasing them. 4x1/2 = 2mks

**12.Disadvantages of overhead irrigation**

-it may require the establishment of wind break.

-causes soil erosion if it is not properly controlled

-encourages fungal diseases such as blight,CBD and others due to water accumulation on the leaves

-expensive to install 4x1/2 =2mks

**13.Dibber ……** used for making holes for transplanting 1mk

**b) Garden trowel…………for** lifting seedlings from the nursery 1mk

**c) stock and die…………..**for cutting thead on pipes 1mk

**d) Pipe wrench………….**for holding tightening and loosening metallic pipes **(1mk)**

**14 functions of.**

**a) Well rotten manure—**provide nutrient to the microorganisms 1mk

**b) Wood ash---improv**es the level of phosphorus and potassium 1mk

**c) Top soil—**introduces micro organisms in the soil **1mk**

15 s Essex saddle back has a black body shoulders and all legs white while wessex saddleback has black body with shoulders and only the front legs white 1mk

**SECTION B**

16(a) **Method illustrated 1mk**

-diagonal/transverse method

b) 3 precaution **taken (3mks)**

- avoid contamination/use sterilized container

-avoid sampling soil from unusual sites e.g ant hills

-avoid mixing top soil with sub soil

c**) 4 reasons why soil from the farm is tested** (4mks)

-To determine the nutrients status of the soil

-To determine the soil type/ph 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 using low crop yield / mineral deficiency

17 a **) farm practice represented by B (1mk)**

**earthing up**

**(b) importanc of the above practice .**

1. **Maize** …..1mk- provide support to prevent lodging.

**(ii) irish potato…..**1mk- improves tuber formation

c) During second weeding (1mk)

18.A**) identify the pest**

. cut worm 1mk

b) Damage crops by cutting the base of the stem of seedling after transplanting 1mk

c)- Mixing appropriate insecticide powder with soil in each hole during transplanting 1mk

- Proper weeding 1mk

19.**State any 5 general characteristics of indigenous breed of cattle (5mks**)

-They have humps that stores fat which is broken down to energy and water in times of starvation

-They are fairly tolerant to high temperatures due to the presence of dewlap and thick hides

-They have high tolerance to tropical diseases ie trapanosomiasis

-They have low production of both meat and milk due to inheritance of poor characteristics

-They have slow growth rate leading to the late maturity

-They can walk for long distances in search of food and water -

-They can stay for long periods without food and water without seriously affecting their performance and body condition

-They have long calving intervals of more than one year

**20 State any 5 factors considered when selecting a nursery site 5m**k

-nearness to water source

-type of soil

-Topography

-previous cropping

-security

-well sheltered place

**21. state conditions that nececiate land clearing 4mks**

-when opening up virgin land

-where a stalk growing crop was previously planted

-where the interval between primary and secondary cultivation is long such that the land has reverted to the original virgin land

-where land was left fallow for a long time

SECTION C

**22a) State and explain 5 charasteristics of a fertile soil 10mks**

-good depth-deep soils give plant roots greater volume to obtain plant nutrients and provide strong anchorage

-proper drainage- a well drained soil is properly aerated promoting healthy root development

-good water holding capacity\_ this will ensure that enough water is retained for plant use.

-adequate nutrients supply- soil should supply the nutrients nedded by the plant in the correct amount and in a form that is available to the crops

-correct soil pH - different crops have different soil pH requirements

-free from excessive infestation of soil borne pests and diseases.

**b) State symptoms of attack by a liverfluke in livestock 5mk**

-loss of weight and emaciation

-pot –bellied condition due to watery swelling on the body of the affected animals

-the animal will suffer indigestion

-damage to the liver tissues and haemorrrhage due to the movement of flukes within the liver.

-Anaemic condition due to sucking of blood

-dullness and the animal appearing depressed

-swollen and painful abdomen

-recumbency preceds death

**c)Describe any 5 factors influencing crop rotation 5mks**

-crop root depth-deep roted crops should be alternated with shallow rooted crops

-crop nutrients requirements -heavy or gross feeders should come first in a newly opened land which is relatively fertile

-weed control- crops which are associated with certain weed should be alternated wirh those that are not

-pest and disease control –crops from the same family should not follow one another in the rotation programme as they are attacked by the same pests and diseases

-soil fertility-- leguminous crops should be included to improve soil fertility

-soil structure..when the soil is used continously it should loose and pliable a grass ley should be included to improve soil structure.

23a**)Describe reasons for pruning in crops (**5x2)

-to train the plant so that it can have the required shapes

-to remove the diseased and unwanted parts of a plant such as extra suckers,leaves, brances and flowers or even stems

-to control cropping by removing unproportional ratio of vegetative and productive parts

-to facilitate picking

-to ease the penetration of the spray

-it controls pest and diseases - pruning discourages breeding and spreading of pest and diseases

b) **Effects of hiv/aids and ill health in agriculture**

-shortage of farm labour making farm labour very expensive

-increasing cost of living of AIDS patients and relatives

-low living standard lead to hopelessness and lack of motivation to invest in agriculture

-low food supply and poverty in general has increased criminal activities.

-A lot of time and resources are used in controlling the pandemic 5mks

c) **Problems associated with the use of organic manure**

-bulkiness-- they are used in large quantities because they have low nutrients value per unit volume

-labourious in application and transport

-they spread diseases , pests and weeds

-if used when not fully decomposed they doesn’t benefit the plant because they release nutrient which scotch crops

-loss of nutrients if poorly stored 5mks