

443

OPENER EXAMS

TERM 3 2023

AGRICULTURE FORM 3

MARKING SCHEME

1. (a) Definition of the following:

- Weed – any plant that grows where it’s not needed. 1x1=1 mark
- Solifluction – movement of materials down slope influenced by gravity. 1x1=1 mark
- Land fragmentation – sub-division of land that makes one farmer have many parcels of land scattered in many areas. 1x1=1 mark

(b) Information found in a title deed:

- Signature of the issuing officer
- Name of the owner
- Date of issuing title
- Land parcel number
- Land size 3x1=3 marks

2. (a) State two disadvantages of tenancy:

- Kenyan land rates are not fixed by the government hence over charging.
- No long term investment if lease period is short
- If no written agreement, tenants have no incentives 2x1=2 marks

(b) Signs of kidding:

- Restlessness
- Loss of appetite
- Slacked pin bones
- Shiny discharge from vulva 3x1½ =1½ marks

3. (a) Reasons of single housing in calves:

- Control disease and parasite spread
- Prevent licking in calves 2x1=2 marks

(b) Areas to avoid when collecting soil samples:

- Old fence lines
- Old manure heaps
- Swampy areas
- Near boundaries
- Between slopes 3x1=3 marks

4. (a) Two significance of the practices below:

- i) De - beaking – prevent egg eating
- Control of cannibalism 2x1=2 marks

ii) Docking – fat distribution in sheep

- Control blow fly infestation 2x1=2 marks

iii) Hoof trimming – facilitate walking/movement

- Prevent injury during topping 2x1=2 marks

(b) Plant population = $\frac{\text{Area}}{\text{spacing}}$

$$\frac{4\text{m} \times 6\text{m}}{75 \times 25\text{cm}} = \frac{400 \times 600}{75 \times 25\text{cm}}$$

$$= \frac{240000}{1875} = \underline{128 \text{ plants}} \quad 2 \times 1 = 2 \text{ marks}$$

5. (a) One importance of soil colour:

- Dark color absorbs heat hence making soil warm
- Light colour reflect light hence regulating temperature 1x1=1 mark

(b) Significance of leveling in nursery bed formation:

- Promotes easy germination of seeds e.g. grasses
- Facilitates uniform germination 1x1=1 mark

6. (a) Characteristics of plants used in green manure formation:

- Should be highly vegetative
- Have fast growth rate
- High nitrogen content
- Rot quickly
- Should be hardy i.e. grow in poor conditions 4x½ = 2 marks

(b) Instances opportunity cost is zero:

- When goods are free
- Where there are no alternatives
- When goods and services are free 2x1=2 marks

7. (a) Four characteristics of beef cattle breed:

- Blocky in structure/shape
- Grow fast hence early maturity
- Breed regularly

- Good foragers
- Short legs
- Deep well fleshed bodies 4x½ = 2 marks

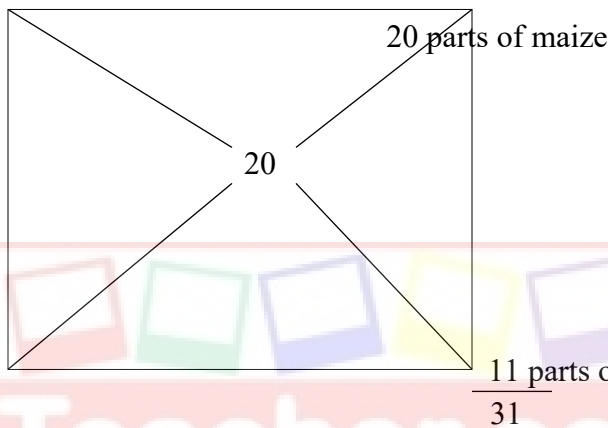
(b) Two characteristics of ruminant animals:

- Chew cud
- They regurgitate
- Have four stomach chamber
- Have alkaline saliva 2x1= 2 marks

8. (a) Food computation:

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Maize 9%



Sunflower 40%

11 parts of sunflower
31

i) Maize = $20 \times \frac{200\text{kgs}}{31} = 129\text{kg}$ of maize

ii) Sunflower cake = $11 \times \frac{200\text{kgs}}{31} = 70.96\text{kgs}$ /parts of sunflower cake. 3x1=3 marks

(b) Four advantages of using seeds as planting materials:

- Easy to treat against pests
- Can be mixed with fertilizers and applied together
- Are not bulky
- Possible to develop new crops due to pollination 4x ½ = 2 marks

9. Two symptoms of phosphorus deficiency:

- Poor root development hence stunted growth
- poor flowering
- poor fruit formation
- purplish colour 2x ½ =1 mark
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10. (a) K – a hive tool
 J - Veil 2x1=2 marks

(b) Uses:

K – used to scrape away the propolis holding the top bars together thus separating them
 J – protect the face from being attacked by the bees.

(c) (i) Worker bee 1 mark

(ii) Queen bee

Drone bee 2 marks

(iii) Queen bee – lay fertile eggs

- Keeping the colony together by producing pheromone hormone

Drone bee – to fertilize the queen

- To regulate temperature in the hive 3x1=3 marks

11. (a) Ear notching 1 mark

(b) Tool used – ear notcher 1 mark

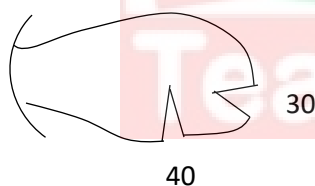
(c) No. 275 2x1=2 marks

(d) Reasons why branding is discouraged when identifying animal number:

- Damage the animals skin/hide

- Painful to the animal 2x1=2 marks

(e)



(f) Artificial vagina

- used for collecting semen from males (bulls) 2x1=2 marks

12. (a) farming practice N – ridging 1 mark

(b) Importance of the practice:

- Important for planting root crops

- It encourages tuber expansion

- Facilitate easy harvesting of root crops

- Conserve soil and water 1x1=2 marks

(c) Advantages of irrigation method L over overhead irrigation:

- It uses little water

- Does not spread fungal diseases

- Control weeds (does not encourage growth of weeds)