MATIGO EXAMINATIONS BOARD

527/1
PRINCIPLES AND PRACTICES OF AGRICULTURE
(THEORY)
MARKING GUIDE 2023
PAPER 1

Qn	Answers	Marks
1(a)	B	
(b)	A	
(c)	D	
(d)	C	
2(a)	*In January 2023, Mr. Kisodde Kito bought a fertile piece of land near Ssezzibwa river swamp. He cleared, ploughed, harrowed and raked it thoroughly well. He made 20 nursery beds, each measuring 1m wide and 20m long. He bought NPK fertilizer and measured it in the ratio of 2:3:1 at the rate of 200g per square metre.* (a) *Total amount of NPK fertilizer (in kgs) which Mr. Kisodde Kito used in the nursery beds.* Area of each nursery bed $= 1 \times 20m$ $= 20m^2$ Total area of 20 nursery beds = $20 \times 20m^2$ = $400m^2$ *If* $200gms$ *of NPK fertilizer were applied per* m^2 *Then total amount of NPK fertilizers added* $200 \times 400 = 80{,}000gms$ *Since* $1kg = 1000gms$ $X = 80{,}000$	

	$\frac{1000x}{1000} = \frac{80,000}{1000}$ $x = 80$ $Therefore\ the\ total\ amount\ of\ NPK\ used\ in\ the\ nursery\ beds = 80kgs.$	
(b)	$Total\ amount\ of\ N(in\ kgs)\ used\ in\ the\ nursery\ beds.$ $NPK\ fertilizer\ has\ N\ in\ the\ ratio\ of\ 2\ out\ of\ 6\ parts$ $Therefore, total\ N\ used$ $= \frac{2}{6}\ x\ 80kgs$ $= 26.7kgs$	
(c)	$Total\ amount\ of\ P\ (in\ kgs)\ used\ in\ the\ nursery.$ $NPK\ fertilizer\ has\ P\ in\ the\ ratio\ of\ 3\ out\ of\ 6\ parts$ $Therefore, total\ P\ used$ $= \frac{3}{6}\ x\ 80kgs$ $= 40kgs$	
(d)	$Total\ amount\ of\ K\ (in\ kgs)\ used\ in\ the\ nursery\ beds.$ $NPK\ fertilizer\ has\ K\ in\ the\ ratio\ of\ 1\ out\ of\ 6\ parts.$ $Therefore, total\ K\ used$ $= \frac{1}{6} \times 80kgs$ $= 13.3kgs$	
(e)	• ***Phosphorus***	
(f)	• *To encourage rapid root establishment and development* • *Phosphorus is not very mobile in the soil hence about five times the required amount has to be applied*	
(g)	•	
3	***Suggest four ways by which a farmer can increase his or her profit margin.*** • *Choosing correct enterprises which are paying* • *Selling off crop produced or animal products at high prices.* • *Following correct or good husbandry practices, e.g. application of fertilizers, proper spacing*	*any four ways = 4 marks*

	• *Reducing costs by eliminating worthless operations* • *Use of better farming techniques that lead to increased agricultural production* • *Identifying proper value of crops to avoid selling at low prices.* • *Advertising the product before selling to be known by consumers or buyers* • *Grading of agricultural products to make their distribution more efficient.* • *Production of high quality products that attract market demand.*	
4	***Give four causes of poultry vices.*** • *Overcrowding birds in the poultry house leading to inadequate food and water space.* • *Prolapse of oviduct common in pullets that are given layers mash too early* • *Irritation caused by external parasites leading to pecking of the bruised area.* • *Insufficient egg laying nests in the poultry house* • *Too much light in the laying boxes* • *Presence of broody hens in the laying boxes* • *Boredom or lack of exercise among birds.* • *Feeding the birds on pelleted feeds that are consumed quickly* • *Feeding birds on poor quality feeds that may be deficient in proteins and minerals* • *Presence of wet litter in the poultry house* • *Poor ventilation* • *Too much heat in the poultry house making birds uncomfortable.*	*Any 4 vice Causes Given = 4marks*
5	***Give five advantages of using water as a coolant in the engine.*** • *Water is everywhere in the world* • *Water circulates freely at any temperature* • *Water is not corrosive* • *Water has a high boiling point* • *Water has a high specific heat capacity i.e. it absorbs heat very readily* • *Water has a very low freezing point* • *Water is cheap to buy*	*Any 5 Adv Given = 5marks*

	PART B: (80 MARKS) ***SECTION I*** ***MECHANISATION AND FARM MANAGEMENT***	
6(a)	***State the qualities of a good roofing material***. • *It must be leak proof* • *It should have good thermal insulator or be high in thermal capacity* • *It must be durable and able to withstand different weather conditions* • *It must be easily obtainable in the area and cost effective* • *It should be pest, vermin and rodent proof, especially for crop stores* • *It should be easy to clean and hygienic particularly where rain water is to be collected.* • *It should be light in weight to prevent damaging of the walls due to over loading* • *It must be fire resistant* • *It should not require specialized skills to apply on the building.*	*Any 6 Qualities Each 1 mark*
6(b)	***Explain the precautions taken when storing maize grain produce.*** • *Ensure proper drying of crop produce before storage* • *The produce should be dressed with recommended pesticides before storage to avoid pest attack* • *Ensure that the crop store is cleaned thoroughly before crop produce storage to avoid contamination.* • *Ensure that the store is well ventilated to allow free air circulation* • *The grain produce should be placed on a raised platform to avoid absorption of moisture or capillary water.* • *The store should be leak proof to avoid rain water entry that would cause rotting of the maize grain produce* • *Different types of produce should be stored separately to avoid cross infection. Do not mix maize grain produce with other crop produce to avoid cross infection.* • *Do not mix old maize grain with new stock to avoid contamination* • *The maize grain store should be vermin proof or have rat guards to avoid rodent and rotting* • *The area should be clean and kept free from any vegetation or bush to avoid theft and maintain maize grain quality* • *The maize grain store should be raised 50cm high from the ground to avoid entry of runoff water that would lead to rotting of the produce.*	$1 \times 8 = 8$ *marks*

	• *Ensure that the maize grain storage containers are clean and dry before storing the maize grain produce to avoid wetting of the produce* • *The store should be secure to avoid theft of produce.* • *Ensure that cracks or crevices in the maize grain store walls are sealed off to avoid harbouring, maize grain storage pests.* • *Do not place maize grain produce storage near the store walls to avoid humid conditions in the produce.*	
7(a) (i)	*Outline an action that is needed to correct each of the following engine faults;* ***Engine jerking.*** • *Replace old spark plugs* • *Clean the spark plugs* • *Select the right gear* • *Change the fuel filters* • *Clean the carburetor* • *Bleed the fuel supply system* • *Replace fuel injectors if they are worn out* • *Readjust the carburetor* • *Add more fuel in the fuel tank* • *Gradual release of the clutch pedal* • *Replace or repair the fuel injector pump*	*Any 5 points each 1 mark*
(ii)	***Engine producing black smoke.*** • *Services the air cleaner* • *Replace old engine oil* • *Replace fuel injectors with new ones* • *Replace piston compression rings* • *Put the required amount of oil in the engine sump* • *Replace old spark plugs* • *Replace carburetor if it is over used* • *Correct setting of the carburetor.* • *Replace old oil filters.*	$1 \times 5 = 5$ *marks*

(b)	*What are the safety rules for tractor operation?* • *Do not get on or off a tractor when it is moving* • *Do not clean or grease an tractor part when a tractor engine is in motion or running* • *Do not other persons to ride in the tractor during operation* • *Do not remove or fit belt to the pulley when the pulley is in operation* • *Avoid removing the radiator cap when water is still hot* • *Never use a clutch pedal as a foot rest* • *Do not run the engine when oil pressure gauge does not show any reading* • *Do not refuel a tractor when the engine is running* • *Do not operate a tractor that has faulty brakes, tyre pressure and clutch* • *Do not check the level of oil when the engine is running* • *Do not drive the tractor when under the influence of alcohol* • *Do not drive when wipers are not in proper working condition* • *Ensure that the battery is firmly fixed to avoid vibrations of engine detaching the terminals* • *Ensure correct level of fuel in the fuel tank* • *Ensure that there is adequate clean water in the radiator* • *Employ a skilled person to operate the tractor* • *Do not drive a tractor with faulty lights, discharged battery, loose terminals or broken bulbs* • *Avoid over speeding* • *Hydraulic system should be in proper working condition.* • *Ensure that the radiator is not leaking and thermostat functions well, the radiator fins should be clean* • *Never wear loose attire when you are going to operate or when operating the tractor.* • *Do not start the engine in full gear, shift lever but in neutral gears.* • *Never dismount the power take off supply before stopping the engine.* • *Avoid sharp turns with trailed or mounted implements.* • *When using mounted implements, never reverse tractor unless implements are lifted.* • *If plough is stuck, do not force the tractor to be propelled or driven forward.* • *Do not use a rotary mower or rotavator without a safe guard.*	*Any 10 points each 1 mark.* $1 \times 10 = 10$ *marks*

- *Make sure all systems are working properly before tractor is put to use.*

8(a) *The following information is about Bugembe mixed farm. Use it to make a profit and loss account as at 31st December 2017.*

Milk sales	*30,000*
Maize sales	*400,000*
Pesticide purchase	*200,000*
Other receipts	*100,000*
Income tax	*120,000*
Closing stock	*150,000*
Rent	*200,000*
Cash at bank	*500,000*
Bank overdraft	*100,000*
Poultry receipts	*500,000*
Opening valuation	*230,000*
Transport expense	*150,000*
Interest on loan	*100,000*

BUGEMBE MIXED FARM PROFIT AND LOSS ACCOUNT AS AT 31ST DECEMBER 2017

Purchases and expenses	***Amount shs.***	***Sales and receipts***	***Amount (shs)***
ITEM	***COST***	***ITEM***	***COST***
Opening valuation e *Pesticide e* *Income tax e* *Rent e* *Bank over draft e* *Transport e* *Interest on loan e*	*230,000* *200,00* *120,000* *200,000* *100,000* *150,000* *100,000*	*Milk* *Maize* *Cash at bank* *Poultry* *Other receipts* *Closing stock*	*300,000e* *400,000e* *500,000e* *500,000e* *100,000e* *150,000e*
Total purchases and expenses	*1,100,000*		
Net profit	*850,000*		
TOTAL	***1,950,000***	***TOTAL***	***1,950,000***

09 marks
e = ½

(b)	*How do such records improve farm performance?* • *They enable a farmer to know whether he or she is making a profit or not* • *They assist a farmer to plan or budget for the farm.* • *They stipulate the physical performance of different enterprises on the farm like poultry, piggery, diary etc.* • *They enable a farmer to make sound decisions about the future farm enterprises to undertake* • *They show whether farm plans are being operated properly* • *They help to show the history of the farm and its development* • *Some farm records like healthy records help in effective control of pests and diseases* • *They facilitate research work on the farm.* • *They help to determine the value of the farm in case of sale* • *Records can be used as reference when a farmer wants to get loans from financial institutions.* • *They can help in drawing up plans in terms of organizing crop rotations, formulating policies and selecting farm enterprises.* • *Tax assessment can be done basing on the farm records which leads to accurate assessment* • *They act as incentives to the farmer by revealing those areas that require improvement* • *They help to settle disputes in case of death of the farm which lead to steady progress of farm activities.* • *They assist a farmer in carrying out management practices on the farm for example, breeding and culling to improve animal production.* • *Farm records are useful in comparing the efficiency of the farm with other similar farms in the same area or elsewhere.* • *They are useful in compiling national agricultural statistics, a tool that can be used to improve agricultural production by policy makers.* • *They provide labour information which can be used to improve agricultural production by policy makers.* • *They provide labour information which can be used to calculate the terminal benefits of the worker.* • *They remind the farmer to pay his or her debts in time*	*Any 6 points each 1 mark*

	• *They help the farmers to launch the claims to the insurance companies incase of losses.* • *They help farmers to share profits and losses at the end of a financial season, incase of cooperatives.*	
(c)	***State the advantages of mixed farming.*** • *A farmer gets double income i.e. from crops and animals or their products sold.* • *Labour is efficiently utilized throughout the year.* • *It ensures income to the farmer throughout the year.* • *Animals kept can provide labour used in ploughing and transportation of plant produce* • *The practice guards against total loss to the farmer since failure in crops can be compensated by animals* • *Crop residues and products can be fed to animals therefore reducing feed costs.* • *Animals can provide manure or farm yard manure that can be used to improve soil fertility for proper crop growth.* • *A farmer, his or her family and customers get a balanced diet by eating crop and livestock products.* • *It ensures proper land utilization* • *It improves the skills of farmers in the business of growing of crops and the rearing of livestock.*	*Any 5 points each 1 mark*
	SECTION II ***CROP PRODUCTION***	
9	*Outline the advantages and disadvantages of broad casting as a method of planting.* ***Advantages*** • *It is a quick method as it saves time.* • *It requires less labour* • *It is an ideal method for very small seeded crops like amaranthus, millet and grass.* • *Crop established provide a good vegetation cover rapidly to control soil erosion* • *Broad casted crops tend to smother weeds / suppress weed growth* • *It can easily be used to obtain a high plant population per unit area. This is desirable when growing green manure crops or crops to be used as fodder.* • *More yield can be obtained per unit area.*	*Any points each 1 mark.* $1 \times 5 = 5$ *marks*

	▪ ***Disadvantages*** • *It is a wasteful method, as a high seed rate is used per unit area.* • *It is hard to regulate plant populations* • *Uneven distribution of seeds may lead to overcrowding and plants will compete for space, light, water and nutrients.* • *Overcrowding may lead to poor quality produce for example; root crops like carrots may not expand well thus remain small.* • *It is difficult to move through the garden to carry out agronomic practices like weeding, spraying, harvesting.* • *It is difficult to mechanize farm operations / makes mechanization of farm operations like weeding difficult* • *Overcrowding creates a micro comate that favours rapid breeding of pests and disease causing organisms.* • *It encourages rapid spread of pests and diseases in crop fields as crops are very close to each other.* • *It is not easy to regulate the planting depth* • *It is difficult to ensure that all seeds are covered after planting.* • *It is difficult to estimate crop yield per unit area.*	$1 \times 5 =$ 05 *marks*
(b)	***Why is it advisable to plant crops in rows?*** • *It is advisable to plant crops in rows due to the following: -* • *Optimum plant population can easily be achieved leading to high yields* • *It is easy to achieve correct spacing which can help to control certain plant diseases such as damping off* • *It encourages effective use of machines like tractors on the farm* • *It encourages effective use of machines like tractors on the farm* • *It is easy to carry out agronomic practices like weeding and spraying without stepping on the crops* • *Lower seed rates are used in row planting than in broad casting method which makes it an economical method.*	*Any 5 points Each 1 mark* $1 \times 5 = 05$ *marks*
(c)	***Outline the benefits of using proper spacing in crop production.*** • *The benefits of using proper spacing in crop production.*	*Any 5 points Each*

<table>
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- *It controls weed growth so that weed growth is not large enough to affect crops*
- *It results in optimum plant population per unit area and maximum utilization of soil nutrients*
- *Each crop gets adequate nutrients, water and sunshine and there is no competition. This results in high yields.*
- *It reduces incidence of pests and diseases. For example, close spacing reduces ground nut rosette disease.*
- *Agronomic practices like weeding, spraying and harvesting can easily be carried out*
- *Correct seed rate or planting material can be used.*
- *It is easy to use machinery when desired.*
- *It checks soil erosion.*

</td><td>

1 mark

$1 \times 5 = 05$ *marks*

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<tr><td>10(a)</td><td>

Give the characteristics of a fertile soil.

A table showing the soil components and their percentages in which they occur in the soil

<table>
<tr><th>SOIL COMPONENT</th><th>PERCENTAGE IN SOIL</th></tr>
<tr><td>Mineral matter</td><td>45%</td></tr>
<tr><td>Soil water</td><td>25%</td></tr>
<tr><td>Soil air</td><td>25%</td></tr>
<tr><td>Organic matter</td><td>05%</td></tr>
<tr><td>Living organisms</td><td>Varying percentage e</td></tr>
</table>

Award 5 marks for a well-drawn table with soil components and percentages.

</td><td></td></tr>
<tr><td>(b)</td><td>

How do soil living organisms contributes to soil fertility in an area?

- *They die and decay to form humus that is a source of plant food*
- *Burrowing organisms improve on soil aeration and water infiltration*
- *They are direct decomposers of organic matter to produce humus that releases plant nutrients and improves on soil structure*
- *They produce various organic and inorganic acids that act as solvents for mineral nutrients before they are taken up by plants.*

</td><td>

Any 5 points Each 1 mark

$1 \times 5 = 05$ *marks*

</td></tr>
</table>

	• *Macro organism mix organic and inorganic components and help develop the soil profile* • *Special purpose bacteria like nitrogen fixing bacterial fix nitrogen from the atmosphere into the soil and converts it into forms usable by plants.* • *Earth worms produce a cast rich in nutrients like calcium and cements together soil particles*	
(c)	***Explain the various ways how the fertility of the soil is lost.*** • *Burning crop residues and vegetation cover leads to loss of nutrient especially nitrogen, phosphorus and Sulphur and destruction of soil structure* • *Continuous cropping without resting land leads to loss of plant nutrients continuously and destruction of soil structure* • *Monocropping or monoculture leads to loss of particular nutrients from almost the same level in the soil and destruction of soil structure* • *Clearing all vegetation expose the soil to leaching and erosion. It also interferes with proper water infiltration into the soil.* • *Over grazing leads to bare compact patches that encourage erosion and loss of organic matter.* • *Excessive use of agricultural chemicals alters soil Ph, Interferes with soil organism activities and makes some nutrients fixed, therefore plant roots can not absorb them* • *Irrigating crops with salty water. The salts which accumulate in soil layers, damage roots and cause water deficiency in plants.* • *Over cultivation that leads to destruction of soil structure.* • *Excessive drainage; nutrients dissolved in the water are carried away from the field and lost* • *Some methods of drainage especially underground dranage compacts the soil leading to poor aeration.* • *Development of hand pan under soil surface due to ploughing at the same depth season after season.* • *Immobilization ; used up of some nutrients like nitrogen in the soil by microorganisms.* • *Volatilization; loss of nutrients to the atmosphere in gaseous state* • *Award 1 mark for each point given and 1 mark for explanation*	2×5 $= 10\ marks$
11(a)	***State the characteristics of a grass suitable for use as a pasture plant.*** • *It should be highly vegetative, able to yield a lot of herbage*	

	• *It should be leafy that is, a high leaf to stem ratio.* • *It should be easy to establish* • *It should be drought resistant* • *It should be able to recover quickly from grazing* • *It should be an aggressive feeder and have a fast growth rate.* • *It should be palatable or easily acceptable by animals.* • *It should be highly adaptable to a wide range of soil conditions* • *It should be of suitable height.* • *It should be resistant to pests and diseases.* • *It should be able to produce leafy material for a long time.*	$1 \times 8 = 08\ marks$
(b)	***Outline the advantages and disadvantages of zero grazing.*** ***Advantages*** • *The system eliminates selective grazing because all forage is cut and mixed before it is fed.* • *It permits keeping animals even where pressure on land is high.* • *Production per unit area of pasture is increased.* • *Grass is cut and fed to animals when it is more nutritious and this can lead to high production in animals.* • *Wastage of pasture due to dung ad urine tainting and trampling is eliminated* • *Animals' energy is conserved because there is no waling and it is converted into production* • *Bloat is reduced because grass is first wilted before it is given to animals* • *It eliminates animals eating poisonous plants and dangerous materials such as polythene* • *It allows the farmer to observe animals closely as they are kept indoors all the time.* • *It allows utilization of pasture obtained from distant land / places* ***Disadvantages*** • *It may lead to accumulation of disease causing organisms as animals are kept in one place.* • *It may require machinery to chop the fodder which is expensive* • *There are high labour costs involved* • *It is tiresome as manure has to be carried back to pastures to increase their productivity*	*1 x 6 = 6 marks*

	• *Continuous harvesting of grass lowers soil fertility* • *Animals do not get enough exercise* • *It is expensive to construct the shed, the feed troughs and water troughs* • *The system limits the number of animals to keep.* • *Supplementary feeding will be necessary in the dry season when there is shortage of grass.* *Any 6 points each* *1 x 6 = 6 marks*	
	SECTION III ***ANIMAL PRODUCTION***	
12(a)	***Explain the factors that may lead to disease outbreak on a poultry farm.*** • *Introduction of diseased birds on the farm, where quarantine is not practiced* • *Introduction of birds that have recovered from a disease but are still careers* • *Mixing old stock with new stock* • *Feeding the birds on contaminated food and water* • *Use of drinkers and feeders contaminated with disease germs* • *Failure to burn or bury dead birds* • *Rodents and wild birds may carry in disease when they come near bird's houses or feeds* • *Use of old litter for new stock of birds.* • *Workers moving into the poultry house without stepping in a disinfectant therefore carrying in disease causing organism.* • *Poor hygienic conditions in and around the poultry house that lead to breeding of germs* • *Poor ventilation in poultry houses that lead to respiratory diseases.* • *Use of contaminated debeaker or vaccinating equipment* • *Failure to follow a vaccination routine or failure to vaccinate at all.* *Award any 5, well explained factors each 2 marks* *2 x 5 = 10 marks*	*10marks*
(b)	***Explain the ways through which the spread of diseases in poultry can be controlled***.	*10 marks*

	• *By following a regular vaccination routine, at the recommended age and administering them correctly* • *By passing introduced birds under quarantine for 30 days in a faraway house.* • *By adding feeding additives in feeds and water to alleviate stress.* • *By keeping the right number of birds in a house to prevent over crowding* • *By ensuring adequate ventilation in the poultry house* • *By placing birds of different age groups in separate house.* • *By ensuring hygiene in and around the poultry house.* • *By making sure that litter is always fresh and dry to control breeding of disease causing organisms.* • *By restricting range birds and wild birds from getting to the farm* • *By making sure that the poultry house is vermin proof* • *By burying dead birds deep and far from the poultry house or by burning them* • *By burning litter from houses where disease breaks out* • *By maintaining a foot bath with a disinfectant at the entrance of the poultry house* • *By providing clean drinking water to avoid spread of diseases like fowl typhoid* • *By carrying out regular deworming to avoid anaemia* • *By raking through litter regularly to avoid damp conditions that encourage causing organisms.* • *By isolating or culling the sick to avoid disease spreading* • *By buying uncontaminated feeds from a reliable source* • *By dusting the birds and the house with recommended chemicals to control eco-parasites.* • *By raising drinkers and feeders off the ground to avoid contamination that would lead to disease.* • *By providing balanced rations to reduce nutrient deficiency diseases.* *Award any 10 points each 1 mark* *1 x 10 = 10 marks*	
13(a)	***Why do heifers or cows sometimes fail to conceive after being served?*** • *Failure to serve the animal at the right time / right stage of the heat period* • *It may be due to improper feeding of animals that affect their physiological and reproduction processes.* • *It may be due to breeding or venereal diseases*	

	• *Cystic ovaries and due to this, they cannot ovulate* • *Hormonal imbalance especially in free martins* • *It may be due to white heifer disease, where a persistent hymen impends semen flow.* • *Poor placement of semen during insemination* • *Use of semen with low sperm count, defective or weak sperms* • *It may be due to unfavourble pH in the reproductive system of the female that kills the sperms* • *Abnormal embryo that fails to implant* • *It may be genetic, where lethal genes lead to death of the embryo.* • *It may be due to a weak uterine wall that cannot hold pregnancy or allow implantation to take place.* • *Female animals may be frightened during mating* *Award 1 mark for each point given* *1 x 10 = 10 marks*	
(b)	***Describe how you would manage a pregnant cow up to calving time.*** • *Carry out pregnancy diagnosis two months after service to confirm pregnancy* • *Deworm the pregnant cow early to control the internal parasites* • *Spray or dip animals regularly to control external parasites* • *Provide balanced rations through pregnancy* • *Provide clean water to cows* • *Provide adequate feeds throughout gestation period* • *Carryout proper disease control to reduce economic loss* • *Dry off the cow at the 7th month to prepare for the next lactation* • *After drying the cow, carry out dry cow therapy to control mastitis on the teats* • *Steam up the animal the last three months of pregnancy to prepare for the next lactation* • *Provide shade for the cow so that it does not suffer from heat stree.* • *Isolate the pregnant cow in a nurse paddock for close monitoring* • *Do not tie the pregnant cow* • *Provide clean straw in the calving area; cows should not calve in paddocks*	***10 marks***

	• *The animal that has calved should be given warm water to drink to ease contraction in the uterus and milled a little to relive pressure on the udder.* • *If the after birth is retained, call in a veterinary doctor for assistance.* *Award a mark for any correct point given* *1 x 10 = 10 marks*	
14(a)	***What is the importance of keeping goats on farms in Uganda?*** • *Goats are hardy and therefore can be kept on marginal land where pastures are scarce* • *Goats are browsers, they do not compete for pasture with cattle and sheep.* • *Goats help clear thickets by their browsing action* • *Goats meat is considered more delicious than others by most people, therefore fetches a higher price* • *They can be kept by low income groups because they are cheaper to maintain* • *Goats suffer less from parasitic worms whose eggs and larva are in ground vegetation* • *They have a higher stocking rate since they are small animals* • *Goats are resistant to may tropical diseases such as tick borne diseases and tsetse flies* • *They are cheaper to feed, they can tolerate feeds deficient in crude protein* • *Goats are prolific, their gestation period is only 5 months and can produce 2, 3 and 4 kids at a go.* • *Goats are early maturing, they are ready for breeding at 9 months* • *Goat skin makes the best quality leather* • *Goats milk is more nutritious and its proteins are more digestible* • *Goat's skin can be put to a wide range of uses.* *Award a mark for each point given.* *(1 x 10 = 10 marks)*	*10 marks*
(b)	***How can the goat industry in Uganda be improved?*** • *By introducing more productive goat breeds* • *By improving existing goat breeds through cross breeding* • *By improving feeding and nutrition of goats* • *By ensuring adequate grazing and fodder preservation* • *By improving goat veterinary services.*	*05 marks*

	Award a mark for each 5 correct was given. *(1 x 5 = 05 marks)*	
(c)	***Outline the features of a healthy goat.*** • *Eyes are alert and bright* • *Walks, runs, lies and gets up with ease* • *It should have no kidding difficulties* • *Produces pale and straw coloured urine with a distinct smell* • *A healthy goat should have a fairly hard stool or dung, no scours* • *Responds well to the environment* • *Should be eager to eat its food with great appetite* *Award a mark for each correct response given.* *1 x 5 = 5 marks*	

END

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