**AGRICULTURE PAPER 2 MARKING SCHEME**

**SECTION A: 30 MARKS**

1. Name three types of specialized feeding carried out in livestock management (1½ mks)
* **Creep feeding**
* **Flushing**
* **Steaming up**
1. Name two methods used in ration formulation (1mk)
* **Trial and error**
* **Pearson’s square method**
1. Name the breed of sheep adapted to wet and marshy conditions of the Kenyan highlands (1mk)
* **Romney Marsh/ kent**
1. Give two reasons for throwing grains to poultry on the litter in a deep litter poultry house (1mk)
* **To help them turn the litter to keep it dry**
* **To keep the poultry**
1. What are the terms used to describe the young ones of the following livestock (2mk)
2. Rabbits : **Kindling**
3. Fish : **Fingerlings**
4. Goat : **Kid**
5. Donkey : **Foal**
6. Name the causal organisms of the following diseases in livestock (2mk)
7. Anthrax **Bacteria/ Bacillus anthracis**
8. Rift Valley fever **Virus**
9. Anaplasmosis **Protozoan /Anaplasma marginale**
10. Milk fever **Lack of calcium and phosphorus**
11. State four management practices carried out in sheep during preparation for tupping (2mks)
* **Crutching/ Barling /tagging**
* **Raddling**
* **Hoof trimming**
* **Ringing**
1. Name three plumbing tools in a farm (1½mks)
* **Stock and die**
* **Pipe wrench**
* **Pipe cutter**
1. Name two exotic breeds of dairy goats (1mk)
* **Toggenburg**
* **Saanen**
* **Jamnapari**
* **Anglo nubian**
1. Name four advantages of natural methods of rearing calves (2mks)
* **Calf takes milk at body temp**
* **Milk is free from contamination**
* **Problems of scouring are minimised**
* **Gets adequate milk for its nutritional requirements**
1. Give four disadvantages of using thatch in construction of farm buildings (2mks)
* **Harbors vermin**
* **Catches fire easily**
* **Requires regular maintenance**
* **Rots easily**
* **Can leak easily if not well placed**
1. State four factors that determine digestibility of a feed (2mks)
* **Animal species**
* **Chemical composition of the feed**
* **Form in which feed is given to the animal**
* **Quantity of food already present in the digestive system of the animal**
* **Energy to protein ratio in the feed**
1. Give any two measures that should be taken to control tapeworms in livestock (1mk)
* **Proper meat inspection**
* **Proper disposal of infected carcass**
* **Routine deworming of livestock**
* **Rotational grazing**
* **Proper disposal of humn waste**
* **Proper cooking of meat**
1. Give four reasons why the lubrication system is important in a tractor (2mks)
* **Increases efficiency**
* **Reduces heat**
* **Acts as a cleaning agent**
* **Prevents rusting of stationary machines**
* **Reduces wear and tear of moving parts**
1. Name three dual purpose sheep breeds (1½mks)
* **Romney marsh**
* **Hampshire down**
* **Corriedale**
1. Name two groups into which vitamins are classified (1mk)
* **Water soluble**
* **Fat soluble**
1. State four ways in which power transmitted from the engine is made available for use (2mks)
* **Propeller shaft**
* **Power take off shaft**
* **Hydraulic system**
* **Draw bar**
1. State four cultural uses of livestock (2mks)
* **Status symbol**
* **Medium of exchange**
* **Social ceremonies**
* **Recreational purposes**
1. Name three enzymes contained in the pancreatic juice (1½mks)
* **Pancreatic amylase**
* **Lipase**
* **Trypsin**

**SECTION B : 20MARKS**

1. Study the diagram below and answer the questions that follow
2. Name the practice illustrated above (1mk)
* **Identification**
1. Name the type of method illustrated above (1mk)
* **Ear notching**
1. Give the identification number of the pig illustrated above (1mk)
* **110**
1. Using a diagram, illustrate how animal number 85 can be identified using the above diagram (2mks)
2. The diagrams below show the behavior of chicks in a brooder in response to heat
3. Explain the behavior of chicks in the brooder (4mks)

 A**: There is draught from the side directly opposite to where the chicks crowd**

B**: Too much heat in the brooder making the chicks to move away**

C**: Correct temperature chicks evenly spread out in the brooder**

D**: Very cold, the chicks crowd around the heat source to get warmth**

1. Explain why the brooder is rounded (1mk)
* **To avoid overcrowding at one point which may lead to suffocation**
1. The diagram below shows an external parasite in livestock
2. Identify the parasite (1mk)
* **Tse tse fly**
1. State two effects of the parasite in cattle (2mks)
* **Transmits tryponosomiasis**
* **Sucks blood leading to anaemia**
* **Bites cause damage to skins and hide**
1. Give two control measures of the parasite (2mks)
* **Bush clearing**
* **Spraying with suitable insecticides**
* **Use of flytraps**
* **Use sterilizing agents on males**
1. Study the following tools and equipment then answer the questions that follow:
2. Identify the tools labeled W, X and Y (3mks)
* W – **plumb bob/plumb line**
* X – **cross pein hammer**
* Y – **hypodermic needle and syringe**
1. State the function of the tool labeled W (1mk)
* **checking the vertical straightness of a wall**
1. State one maintenance practice carried out on tool Y (1mk)
* **Cleaning and sterilizing**
* **Proper storage**

**SECTION C : 40MARKS**

1. a). Discuss anthrax disease under the following sub headings:
2. Animals affected -**cattle, sheep, goats, pigs, camels, donkeys** **(*2 x ½*)**
3. Causal organism- **bacillus anthracis/ bacteria** **(*x 1)***
4. Symptoms observed in affected animals
* **Lack of blood clotting**
* **Extensive bloating**
* **Blood stained diarrhea and milk**
* **High and sudden fever**
* **Sudden death**
* **Carcass lacks rigor mortis**
* **Production of tar like blood from oral openings**

 **(*1 x4)***

1. Control measures
* **Vaccinate with blanthrax**
* **Proper disposal of carcass**
* **Avoid contact with the carcass**
* **Disinfect the area of death and burial (*1 x4)***

 b). (i). State four problems associated with artificial methods of service in cattle production

* **Expensive**
* **Requires highly trained manpower**
* **Requires special storage facilities**
* **Laborious**
* **May not be accurate**
* **Bad traits spread very fast (*1 x4)***

 (ii). Give six factors that affect productivity of draught animals

* **Weather conditions**
* **Health status of the animal**
* **Level of training**
* **Proper harnessing**
* **Proper feeding**
* **Proper loading**
* **Physiological conditions of the animal e.g. pregnancy**
* **Proper maintenance of the implement**
* **Level of fatigue**

 **(*1 x6)***

1. a). Discuss any six sources of power on the farm (12mks)
* **Human power: limited to very light tasks with quality of work produced being low**
* **Animal power: employs use of animals, e.g. donkeys, to provide power for cultivation and transportation**
* **Wind power: provides power for light jobs on the farm. It is limited by unrealibity in direction, strength and availability**
* **Solar radiation: is the radiant energy from the sun and it can be used in different ways**
* **Biomass: employs the use of biogas, wood or charcoal**
* **Electrical power: obtained from geothermal, water, nuclear or storage battery. Is used for different tasks on the farm.**
* **Fossil fuel: employs use of petroleum, coal or natural gasses.**

 **(*6x2)***

 b). Discuss the components that make up the power transmission mechanism of a tractor

* **Propeller shaft: connects gear box to the differential**
* **Power take off shaft: transports power to other implements connected to it, e.g. mowers**
* **Hydraulic system: raises or lowers the mounted implements**
* **Draw bar: helps in attaching trailed implements e.g. harrows**

 **(*2 x4)***

1. a). Describe any five general effects of parasites on livestock
	* **Sucking blood: some parasites suck blood from their hosts leading to anaemic conditions and death.**
	* **Eating food intended for livestock: this can lead to malnutrition and weakness in the host.**
	* **Causes obstruction: internal parasites block the alimentary canal which can lead to death**
	* **Transmission of disease: can cause death or lower production in livestock**
	* **Irritation to animals: some parasites make animals uncomfortable**
	* **Damage to internal tissues and organs preventing proper functioning of the organs**

 **(*2 x5)***

 b). Outline the general characteristics of beef cattle breeds

* **Block in shape**
* **Deep, well fleshed body**
* **Grow fast leading to early maturity**
* **Efficient in food conversion**
* **Maintain good weight even during drought**
* **Good foragers**
* **More tolerant to high temperature**
* **Breed regularly**
* **More resistant to diseases**
* **Have short, strong legs**

 **(*1 x10)***