**TERM 2 2021**

**AGRICULTURE**

**MARKING SCHEME**

**PAPER 2**

**SECTION A(30 MARKS) ANSWER ALL THE QUESTIONS .**

Q1. State **four** functions of water in the body of livestock animals. **(2marks)**

* ***Form component of body cells/body fluids.***
* ***Acts as medium of transport of various nutrients.***
* ***Help in regulation of body temperature.***
* ***Help in excretion of waste products of metabolism.***
* ***Forms part of animal products like milk and eggs.***
* ***Help maintain animal cells.***

***4 x ½ = 2marks***

Q2. Differentiate between essential and non-essential amino acids.  **(1marks)**

* ***essential amino acids must be supplied in livestock feed as they are not synthesized in the animal body, while non-essential amino acids need not to be supplied in livestock diet as they can be synthesized in livestock body.***

***1x1=mark***

Q3. Give **two** reasons for turning eggs regularly during incubation? **(1mk)**

* ***To prevent germinal disc from sticking on the shell as this may cause death of the embryo.***
* ***To make sure warmth is distributed evenly around the egg for uniform embryo.***

***2x ½ = 1 mark***

Q4. Name **two** functions of the crop in the digestive system of chicken. **(1mk)**

* ***Store food temporarily.***
* ***Moisten the food.***

***2X ½ = 1mark***

Q5. State **four** factors considered when computing a livestock ration. **(2marks)**

* **Co*st of the feed***
* ***Availability of feed stuff.***
* ***Nutrient requirement of the animal***
* ***Type of animal***
* ***Age of the animal.***

***4 x ½ =2marks***

***Q6.*** Why is raddling essential in sheep management? **(1mark)**

* ***To identify the ewes that have been served.***
* ***To identify the ram that has served a certain ewe.***

***2 x ½ = 1 mark***

**Q7.** State **four** advantages of battery cage system of poultry rearing. **(2marks)**

* ***Higher egg production.***
* ***Accurate individual record on egg production.***
* ***Control egg eating and cannibalism.***
* ***Eggs are kept clean.***
* ***No food contamination.***
* ***Broodiness is discouraged.***
* ***easy to handle***
* ***Low labour requirement.***

**4x ½ = 2 marks**

**Q8**. Give a reason why the animal should not released to the pasture when freshly sprayed with acaricidal wash. **(1mk)**

* ***To minimize contamination of pasture with chemical wash.***

***1x1=1mark***

**Q9.** Name **two** major methods of administrating drugs to livestock.  **(1mark)**

* ***Oral administration.***
* ***Intravenous.***
* ***inter muscular***

***Any two 2 x ½ = 1 mark***

**Q10.**Outline **four** methods used to handle livestock. **(2marks)**

* ***Restraining in a crush.***
* ***Using bull ring and lead stick.***
* ***Using a halter on the neck and head.***
* ***Using a head yoke.***
* ***Casting the animal using a rope on head, neck, middle region and rear of animal.***
* ***Firm holding of the nose septum between the thumb and fore finger while the other hand hold the jaw to enable ease drenching.***

***Q.***11. How does good nutrition help to control diseases in livestock. State two. ***(1mark)***

* ***By preventing nutrient deficiency diseases.***
* ***By improving body resistance against disease.***

***2x ½ = 1marks***

***Q.12.***Give two reasons for flushing in sheep.  ***(1mk)***

* ***Increase conception rate.***
* ***Facilitate implantation of the zygote.***
* ***Increase lambing percentage.***
* ***Increase twinning/ multiple birth .***

***2x ½ = ½ mark***

***Q.13.*** Give three factors that affect the quality of honey.  ***(1 ½ mark)***

* ***Type of plants from which nectar was collected.***
* ***Maturity stage of honey at the time of harvesting.***
* ***Methods of harvesting***
* ***Method of processing honey.***

***3x ½ = 1 ½ marks***

***Q.14***. State three conditions that make a cow to withhold milk during milking***.(1 ½ marks)***

* ***Washing a cow with hot water.***
* ***Beating the cow(mistreatment)***
* ***Change of milking man.***
* ***Unfamiliar noise.***
* ***Absence of food during milking.***

***3x ½ = 1 ½ marks***

***Q.15.***Name the most appropriate tools used in the following operations. ***(2marks)***

1. Removing metal chipping on a file.

* ***Wire bush***

1. Cutting wood along the grain***.***

***Rip saw***

1. Branding

* ***Branding Iron***

1. Detaching honey combs during honey harvesting

* ***Hive tool.***

***4x ½ =2marks***

Q.16.State **four** causes of infertility in cows. **(2marks)**

* ***Retention of placenta.***
* ***Lack of vitamin E/Deficiency of essential minerals.***
* ***Damaged uterus***
* ***Blocked fallopian tube.***
* ***Infection of breeding diseases.e.g contagious abortion( Brucellosis)***
* ***Occurrence of fremation (when heifer is bone twin with bull)***

***4x ½ = 4marks***

***Q.17.*** List **four** maintenance practices carried outon disc plough. **(2marks)**

* ***Clean after use***
* ***Replace worn out parts***
* ***Lubricant moving part/ disc bearings rej. Movable parts.***
* ***Tighten loose nuts and bolts***
* ***Paint with old engine oil for long storage.***
* ***Storage under shed(properly)***

***4 x ½ = 2 marks***

***Q. 18.*** a) Name a protozoan disease that is not vector transmitted ***. ( ½ marks)***

* ***coccidiosis 1x ½ = ½ mark***

***b) Name one vector that transmits each of the following diseases. (1mark)***

1. Anaplasmosis- ***Blue tick***
2. East coast fever***-Red legged tick, brown ear tick.***

***2x ½ = 1 mark***

***c)*** Define the term quarantine as used in livestock production. **(1/2 marks)**

* ***Restriction of movement of livestock and other products into or from an area where there is an outbreak of a notifiables disease.***

***1x ½ = ½ mark***

***d)*** What is the effect of petroleum jelly smeared on combs and wattles of birds? ***(1mark)***

* ***It suffocates the fleas to death. 1x1=1mark***

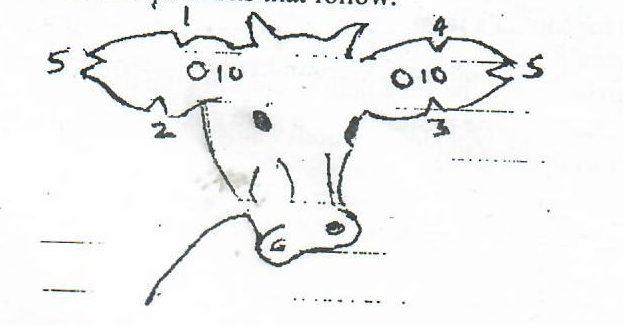
***Q.19.*** List down **four** short term services practices done on a tractor***. (2marks)***

* ***Checking oil level with dipstick***
* ***Water level in the radiator should be checked daily***
* ***Level of battery electrolyte should be checked daily.***
* ***Removal of large sediments from the bowl.***
* ***Checking the tyre pressure.***
* ***Brake fluid level checked daily***
* ***Differential/ gear boy oil checked daily***

***4 x ½ =2marks***

***SECTION- B 30 MARKS(ANSWER ALL QUESTIONS IN THIS SECTION)***

**Q. 20** .The diagram illustrates a method of identification in livestock.



1. Name the type of identification illustrated on the diagram. **(1mk)**

* ***ear notching***

***1x1=1 mark***

1. Give the identification number of the animal illustrated on the diagram . (**1mk)**

* ***animal no. 40***

***1x1=1mark***

1. using diagram, illustrate how you can identify animal numbers 36 and24.(**2mks)**

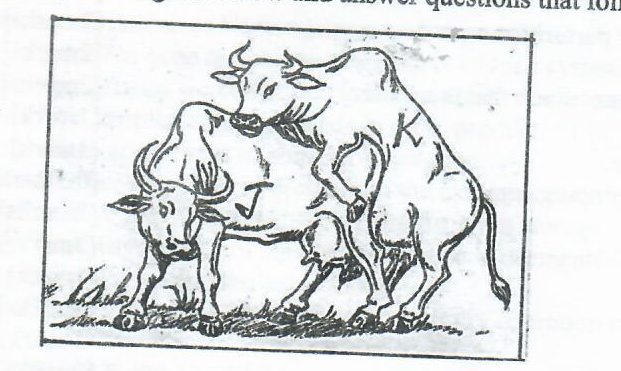
|  |  |
| --- | --- |
| **Animal No.24** | **Animal No. 36** |
|  |  |

1. Apart from this method of identification, give two methods used in livestock to achieve the same purpose.

* ***Branding***
* ***Ear tattooing***
* ***Use of chains and straps***

***Any two 2x ½ =1mark***

***Q.21****.* Study the diagram below and answer questions that follow.



1. Which of the above cows shows the signs of heat. **(1mark)**

**J**

***1x1=1 mark***

1. Give one reason to confirm your answer (a) above. **(1mark )**

* ***J stands still when mounted by K.***

***1x1= 1mark***

1. State **two** benefits of natural mating system. (**2marks)**

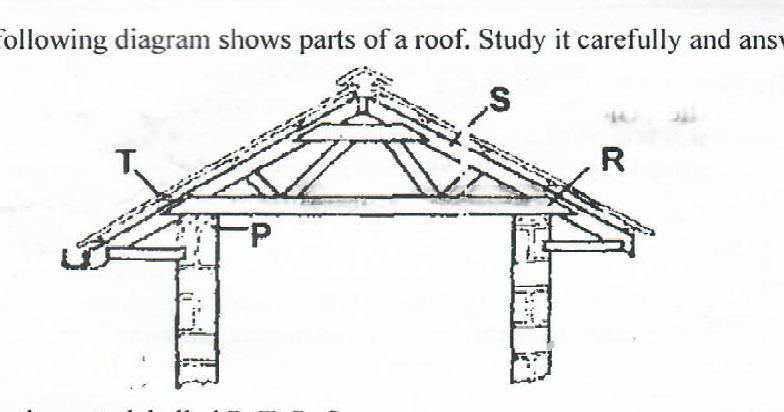
* ***More accurate due to heat detection by males.***
* ***Less laborious.***
* ***Useful when heat signs cannot be detected.***

***Any 2x1=2marks***

***d)*** Name a disease that is easily spread by this method of mating. **(1mark)**

* ***Brucellosis/contagious abortion. 1x1=1mark***

Q.22. The following diagram shows a part of a roof. Study it carefully and answer the questions that follow.



1. Name the parts labelled P,T, R S. **(2marks)**

**P-Wall plate. 1x ½ = ½ mark**

**T- Purlin . 1x ½ = ½ mark**

**R- Tie beam / cross tie. 1x ½ = ½ mark**

**S- Rafte 1x ½ = ½ mark**

1. State the functions of P and T. **(2marks)**

P- ***Hold the trusses securely.***

***1x1= 1 mark***

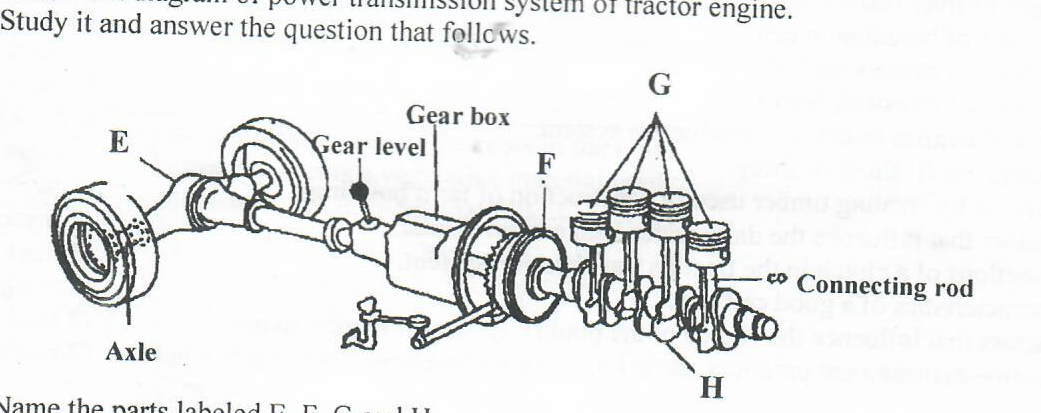
T- ***Hold the roofing materials.***

***1x1= 1 mark***

1. Give **two** chemical preservatives for treating timber before use in the construction of farm structures

* ***far, creosol, tanex, used engine oil copper sulphate solution.2x ½ = 1mark***

***Q.23.*** Below is a diagram of power transmission system of a tractor engine study it and answer the questions that follow.



1. Name the parts labeled E, F, G H .  ***(2marks)***

***E-differential***

***F- Fly wheel***

***G-Piston***

***H- Crankshaft***

***4 x ½ = 2 marks***

1. State the function of E and H.

***E- changes the direction of drive to right angles to power the wheel.***

***1X1= 1mark***

***H- Rotate and help the piston to move up and down.***

***1x1= 1 mark***

1. State **two** precaution when handling farm tools and equipments

* ***Tools should always be left in a safe place after use.***
* ***Use of the tool for correct job.***
* ***Tools should be maintained and service to remain in good working condition and last long.***
* ***Tools should be handled correctly when in use to avoid damage to the tool and injury to the user.***
* ***Use of safety device to reduce accidents and to maintain a safe working environment .***
* ***All tools should be stored properly in tool cabinets or racks.***

***Any 2 x ½ = 1 mark***

**SECTION- C 40 MARKS (ANSWER ONLY TWO QUESTION IN THIS SECTION)**

Q24. a) Describe the life cycle of a three host tick. **(8marks)**

* ***A larva climbs on the host.***
* ***Larvae feed on first host.***
* ***Engorged larvae drops on to the group and moult into nymph***
* ***Nymph climbs o to the second host.***
* ***Engorged nymph drops to the ground and moult into adult.***
* ***Adult climb on the third host***
* ***Engorged female drop to the ground and lay eggs.***
* ***Egg hatches into larva.* 8x1=8marks**

**b)** Give **three** tools used in construction of a wooden fence stating the use of each.**(3marks)**

* ***Hand saw- this is for cutting timber to the recommended sizes.***
* ***Claw hammer-for driving in nails into the work surface or out of the surface***
* ***Plumb rod-ensures that the fence posts are vertical.***
* ***Hole digger/soil auger-for digging the holes.***
* ***Ramming rod-to firm the soil around the posts.***
* ***Garden line- to establish straight lines. any 3x1=3marks***

***c)*** State **five** management practices done on an incubator. (**5mks)**

* ***Egg turning after every 6-8 hours each day around 1800(but not done in the first 24 hours and last 3days)***
* ***Remove broken eggs***
* ***Maintain temperature at the appropriate range always.***
* ***Add water if necessary to maintain the appropriate humidity always.***
* ***Remove infertile eggs on the 5th day.***

***5x1=5marks***

d) State **four** factors that should be considered when selecting dairy goat for breeding.(4marks)

* ***Should be a high milk producer.***
* ***Should be healthy.***
* ***Should be fertile***
* ***Should be docile/mild temperature***
* ***Should have a good mothering ability***
* ***Should be disease resistant/tolerant.***
* ***Should be adaptable to area to be kept.***

***Any 4x1= 4marks***

***Q25.a)*** Explain **any four** factors considered in siting farm buildings and structures***. (8marks)***

* ***Location of homestead- homestead should be in a position where farmer has a full view of all enterprises in the farm.***
* ***Security-structures should be safe from predictors and trespassers.***
* ***Relationship- related structures should be close to each other e.g dairy unit and calf pen.***
* ***Topography- gently sloping areas is most suitable to reduce construction cost.***
* ***soil type- firm well drained soil***
* ***Direction of prevailing wind-structures such as pig sty and latrines which produces foul smell should be constructed on the leeward side of the homestead.***

b) Discuss foot-rot disease under the following sub-headings.

1. Predisposing factors **(5marks)**

* ***Injury on the hooves***
* ***Long overgrown hooves***
* ***Muddy surrounding***
* ***Unhygienic condition in cow shed***
* ***Age of the animal.***

***5x1=5marks***

1. Symptoms **( *3x1* =3marks)**

* ***Lameness***
* ***Fever***
* ***Lack of appetite***
* ***Emaciations***
* ***Swelling of the foot***
* ***Rotten smell from hooves***
* ***Grazing while kneeling for the sheep*.**

1. Control ***4x1=4marks***

* ***Isolate the infected animals***
* ***Provide clean and dry surrondings***
* ***Regular hoof trimming***
* ***Treat the animals using antibiotics***
* ***Use of foot baths in dipping the animals.***

***Any 4x1=4marks***

**Q26.a)** Give **four** functions of a cooling system in a tractor engine.  **(4marks)**

* ***To remove excess heat from the engine.***
* ***To maintain the engine operating temperature where it works most efficiently.***
* ***To bring the engine up to the right operating temperatures as quickly as possible.***
* ***To prevent the engine from overheating. 4x1= 4marks.***

**b**) Describe **five** management practices carried out on piglets immediately after birth**. (5marks)**

* ***Check and ensure the piglet is breathing.***
* ***Keep piglet in a warm place.***
* ***Ensure the piglet suckle the mother within first 6-12 hours inorder to get colostrum which is rich in nutrients.***
* ***Disinfect the naval cord to avoid naval illness or any possible infections.***
* ***Ensure there is removal of the birth to prevent the sow from eating the piglet.***
* ***Assist the piglet to suckle.***
* ***Provide iron injection to avoid anaemia.***
* ***Weigh the piglet and keep recording.***

***Any 5x1=5marks***

**c)** Explain **five** factors that affect digestibility of food in livestock **(5marks)**

* ***Chemical composition of the feed e.g of ligrin or cellulose will influence digestibility.***
* ***The form in which feed is offered to the animal e.g crushed maize is more digestible than whole gram.***
* ***The species of the anima e.g digestibility of grass is higher in sheep than in pigs.***
* ***The quantity of feed already present in the digestive system of an animal.***

***1mark for stating and explanation.******5x1=5marks***

**d**) List **six** limitation of animal power as compared to tractor power. **(6marks)**

* ***More tedious than tractor.***
* ***Animal get tired and slow down work***
* ***Animal require extra land for grazing.***
* ***Animal cannot be used throughout the day.***
* ***Some animals are difficult to handle.***
* ***Animal power is uneconomical on large scale production.***
* ***Animals are likely to fall sick and may take long to recover.***

***Any 1x6=6marks***