AGRIC PP2 MS

1. **State four reasons why rabbit rearing is gaining a lot of popularity in Kenya. (2mks)**

Have low food requirements

Have low space requirements

Can do well in virtually all environments

There urine and waste are source of good quality manure **(½ x 4 = 2 marks)**

2. **State the functions of the following tools.**

i) Claw bar . (1mk)

For removing long nails from wood,straining fencing wires or digging fencing holes **(1 x 1= 1 mark)**

ii) **Mortise gauge.** (1mk)

Used to mark two parallel lines on wood.the distance between the lines is adjusted by moving one of the spurs. **(1 x 1 = 1 mark)**

3. State **four** characteristics of merino sheep. (2mks)

-Muzzle is flesh coloured

Their wool,hooves and horns are white

The have a drroping rump

Small in body and angular in form

Have a narrow chest hence a close together front

Hardy and does well in extensive conditions

Have a good flocking instinct

Produce fleece that is highly valued, long stapled and low in shrinkage. **(½ x 4 = 2 marks)**

4. A plumber was called to repair a water pipe that was leaking. List **four** tools that he would probably use.

-Stock and die

-Pipe wrench

-Pipe cutter

-spanner **(½ x 4 = 2 marks)**

5. State **four** factors that influence the variation or the rate of respiration in animals. (2mks)

-body size of the animal

-amount of exercise done

-degree of excitement

-Ambient or environmental temperature

Health of the animal **(½ x 4 = 2 marks)**

6. State **four** disorders that may result in animals due to mineral deficiency. (2mks)

Anaemia due to lack of iron

Curled toe paralysis due to lack of cacium and phosphorus

Milk fever due to lack of calcium

Goiter due to lack of copper

Swayback in lambs due to lack of copper

Bovine ketosis or acetonemia due to impared metabolism of carbohydrates and volatile fatty acid

Osteomalacia due to lack of phosphorus. **(½ x 4 = 2 marks)**

7. State four effects of keds in sheep **(2mks)**

-irritation under heavy infestation

-Animal scratches and bites itself thus damaging the wool

-Retarded growth in lambs

-Anaemia **(½ x 4 = 2 marks)**

8. Mention four factors that determine the amount of water required by an animal (2mks)

-Ambient temperature

-Type of food eaten by an animal

-Level of production or amount of work done

-Weight of the animal or body size

-Species of the animal **(½ x 4 = 2 marks)**

9. Mention four reasons for steaming up in cattle. **(2mks)**

-Provide nutrients for maximum foetal growth

Buids up energy for parturition

Ensures birth of a healthy animal

Promotes good health of the mother

Increases and maintains high milk yield after birth **(½ x 4 = 2 marks)**

10. Differentiate between crutching and ringing in animals. (2mks)

Crutching is the cutting of wool round external reproductive organs of female sheep to facilitate mating and prevent infection while ringing is the practice of trimming wool around the sheath of the penis of the rams to facilitate mating. **(2 x 1= 2 marks)(marked as a whole)**

11 . State four characteristics of a poor layer. (2mks)

Skin colour is yellow in the vent, legs and beaks

Combs,wattles and vent become shriveled

Width between pelvic bones is narrow hardly fits two figures

Eyes are dull

Breast become hard **(½ x 4 = 2 marks)**

12. List two types of lambing management in sheep (1mk)

Drift lambing

Pen lambing **(½ x 2 = 1 marks)**

13. State four disadvantages of battery cage system of rearing birds. (2mks)

- Initial cost is expensive
- High level of management and technological management
- In case of disease outbreak spread is vary fast.
- Birds develop bruises on combs, breasts an toes as they stick their necks out to eat and walk in cages
- Birds do not have room for exercise

- System is not good for brooding and rearing chicks **(½ x 4 = 2 marks)**

14. **State four advantages of the Kenya top bar hive** **(2mks)**

-top bar can be removed for inspection of the combs and replaced

-Honey combs can be removed without disturbing the brood

-Honey is of high quality without brood due to queen excluder

-More wax is harvested as combs are not returned

-Easy to construct and repair **(½ x 4 = 2 marks)**

15. State two symptoms of black quarter on a carcass of cattle. **(1mks)**

-Blood oozes from the anus and nose of the dead animal

-If affected muscles are cut they appear dark

-There is a bloody froth with a smell of rancid butter. **(½ x 2 = 1 marks)**

16. Name two types of lubrication systems in a tractor. **(1mk)**

-splash feed type

-Force feed type

-Oil mist type **(½ x 2= 1 marks)**

17. State two ways of controlling bloat in cattle. **(1mk)**

-manual means by exercising the animal or massage the animals abdomen to help eject gases

-surgical means by use of stomach pump or use of a troca and cannula

-Chemical means by drenching using oils like turpentine oil mixed with vegetable oil or use of Epsom salt or use of methyl silicone injection on the rumen. **(½ x 2 = 1 marks)**

SECTION B

18. State the names of the pig breeds above

X-berkshire

Y-essex saddle back

Z-wessex saddle back **(1 x 3 = 3 marks)**

b) **State two differences between large white and landrace breeds of pigs.** **(2mks)**

Large white	Land race
Snout broad and slightly dished	Snout straight
Ears upright	Long ears drooping over the face
White but may have few blue spots	White in colour

(any 2x 1 = 2 marks)

19. a) Name the parts labelled J and L

J-inlet

L-outlet **(1 x 2 = 2 marks)**

b) State the function of part labelled K (1mk)

-direct away excess water during floods or excess rainfall to avoid caring away of fish

(1 x 1 = 1 marks)

c) **Explain how fingerlings are introduced into a pond.** **(2mks)**

They are made to acclimatize first with the water then they are allowed to get into the water at will

(1 x 1= 1 marks)

20. a) State the nutrient that chick A may be lacking **(1mk)**

Manganese

(1 x 1= 1 marks)

b) State the name of the disease that chick B is suffering from? **(1mk)**

Newcastle

(1 x 1= 1 marks)

c) What other symptom can be shown by breeding birds lacking the nutrient name a) above?

(1mk)

Reduced hatchability

Reduced shell thickness

(1 x 1= 1 marks)

d) State two control measures of the disease indicated by chick B (2mks)

-kill all birds and burn them

-Vaccination

-Quarantine

(2 x 1= 2 marks)

21. a**) Name parts L and M**

L Gland cistern

M Teat cistern

(1 x 1= 1 marks)

b) State the hormone responsible for milk let down. **(1mk)**

Oxytocin

(1 x 1= 1 marks)

c) **Define dry cow therapy.** **(1mk)**

Application of antibiotics in the teats of a cow during the drying off period to avoid mastitic infection

(1 x 1= 1 marks)

d) Why should milking be done very quickly and evenly. **(1mk)**

The effect of oxytocin lasts for a very short time (5 to 7 minutes).the animal may hide milk.

(1 x 1= 1 marks)

Section C (*Answer any two questions. Each question carries 20 mks*))

22. a) Explain five causes of livestock diseases. **(5 mks)**

-nutritional causes e.g. deficiency in minerals like iron leading to anaemia

-amount of food eaten by an animal e.g. bloat due to excess intake of lush pasture

-physical causes e.g. physical injuries or excess application of pressure

-chemical causes e.g. ingestion of poisons like herbicides, acids, insecticides etc

-infectious living organisms e.g. bacteria, viruses, protozoa, parasitic organisms

(5 x 1= 5 marks)

b) Describe the life cycle of a beef tape worm. **(10mks)**

-a human drops tape worm segments called proglottids full of eggs with faeces

-once outside the eggs are released from the segments

-They are picked by the right intermediate host (cattle) when feeding

-After being ingested they hatch in the intestines into embyros

--The embryos penetrate the intestinal wall and enter the blood stream

They move to the liver and then are distributed through the body into the muscles

-They become cysts

-Cysticercus cellusosae (the bladder worm) prefers muscular tissue

-If under cooked beef with cysts is eaten by human being he gets re infected.

-In the intestine, the cysts wall dissolves and the parasite attaches itself on the wall of the intestine then developed to adult tapeworms.

(10 x 1= 10 marks)

c) Explain five reasons for inbreeding in livestock. **(5 mks)**

-to increase genetic uniformity in the herd through increasing homozygozity

-used to fix required characteristics in the new breeds

-to increase phenotypic uniformity

-Used to get proven sires .possible by back crossing sires with their daughters

-Used in animals of high prepotency. Can test ability of animals to pass desirable characteristics to offspring

(5 x 1= 5 marks)

23. a) Describe ten factors considered when selecting breeding stock. (10 mks)

-Age .select young animals that have parturated for not more than 3 times

-level of performance. Select animals of high performance

-physical fitness. Select animals free from any defects

-health .select healthy animals

-body conformation. Select animals with proper body conformation

-temperament /behavior. Avoid animals with undesired behavior.

-Quality of products. Select animals that give products of high quality

-Mothering ability. Select animals with good mothering ability

-Adaptability. Select well adapted animals

-Prolificacy. Select animals that are highly prolific.

(10 x 1= 10 marks)

b) Describe the life cycle of a bee. (5mks)

-fertilized queen lays eggs in cells

-the warmth and moisture generated by a cluster of worker bees allow the eggs to hatch after 3 days to larva

-the larvae are fed by nurse bees on special pulp (pollen and honey) they spin into a cocoon and moult into pupa

-the pupa becomes a young bee after ten days and emerges from the cocoon.

(5 x 1= 5 marks)

c) Explain the procedure of establishing a barbed wire fence. (5mks)

-clear the fence line i.e. 2m wide

-Measure and mark points on the fence line where holes are to be dug determing the position of the gate. Spacing should 4-6 m depending on use.

-Dig holes to a depth of 60 cm for main fence and 75-90 cm for corner and gate posts

-Place treated posts in the holes in an upright position

-Mix concrete of 1:3:5 ratio and place in the hole or ram to firm the base

-Nail barbed wire onto the posts with fencing staples while stretching using a wire strainer

-Fix the lower strand first and used it as a guide to fix the rest.

(5 x 1= 5 marks)

24. a) Explain ten short service practices done on a tractor. (10mks)

- Checking the engine oil daily by use of a dip stick. If the oil level is low, it should be added.
- The fuel level should be checked at the start of every day's work and added if necessary.
- Water level in the radiator should be checked and if possible topped up.
- The level of the electrolyte should be checked daily and topped up with distilled water accordingly.
- Nuts and bolts should be tightened every day.
- Lost nuts and bolts should be replaced before the day's work.
- Grease should be applied by use of grease gun through the nipples.
- Large sediments from the sediments bowl should be removed.

- The tyre pressure should be checked daily before the day's work.
- The fan belt tension should be checked to ensure that it deflects between 1.9cm and 2.5cm when pushed.
- The brake shaft bearing should be greased.
- The brake fluid level is maintained at the recommended level.

(10 x 1= 10 marks)

b) Describe the management of chicks in a brooder up to nine weeks. (10mks)

- Start 2-3 days before arrival.
- The brooder house should be cleaned to remove old litter and then disinfected.
- New litters 5-10cm high should be put in and covered with absorbent materials/news papers. Removed when chicks learn what food is.
- Equipment should be cleaned, disinfected and tested to make sure that they are working.
- Feed and water should be placed into shallow containers.
- Chicks are placed in the brooder during the day to familiarize with the brooder.
- If chicks arrive stressed and weak they should be given glucose solution in the waterers.
- In case the heat source is charcoal burners they should be covered with wire mesh.
- Feed chicks with chick mash which is later mixed with growers mash as the chicks grow.
- Clean water should be provided and changed regularly.
- Any vices should be checked and controlled.
- Any dead chicks should be removed as soon as seen.
- Ventilation should be used to control the temperature and humidity in the brooder.
- Constant disinfection is required at the entrance to avoid diseases.
- Brooder space should be increased as the chicks grow.
- Introduce roosts in the 6^{th} week
- Provide grit to help in digestion
- Debeaking should be done at 10 days old.
- Vaccination against diseases such as Gumboro after 2 weeks, New Castle at 3-4 weeks and fowl typhoid at 7 weeks.
- Dusting to control external parasites.
- Growers' mash should be introduced gradually at 7 weeks old.
- Chicks are removed from the brooder when they are 8 weeks old.
- On average the chick uses about 1.5kg - 2.2kg of chick mash by the time it is 8 weeks old.
- In the 9^{th} week chicks are fed on growers mash only and are taken to main poultry house.

(10 x 1= 10 marks)