**SET 2**

444/2

AGRICULTURE PAPER 2 MARKING SCHEME

**1. i) a ram and a ewe. (1 mark)**

a ram is a mature male sheep while an ewe is a mature female sheep

**ii) Quarantine and prophylaxis (1 mark)**

Quarantine – Restricts movement of infected stock obviating their chances of mingling with

healthy stock.

Prophylaxis – Prepares the animals body’s immune system to combat likely infection

 **iii) Mortality rate and incubation period. (1 mark)**

Mortality rate is the likelihood of death occurring in a disease outbreak while incubation rate is the duration between the time of infection and the time the first sign appear.

**2. Give two reasons for steaming up in dairy cattle management ( 1 marks)**

-Provides nutrients for maximum development of the foetus

-Helps to buld up energy for parturition

-Ensures birth of a healthy animal

-Promotes good health of the mother

-Increases and maintains high milk yield after birth

**3. State the parturition period of the following animals kept in the farm. ( 2 marks)**

 Cow- 270-285 days

Goat-150 days

Rabbit-28-32 days

Sow-113-117 days

 **4. State three reasons for castrating a billy goat. (1 ½ marks)**

-To improve the quality of meat

-To increase the growth rate

 -To control breeding

-To make the animal docile

 **b) State two methods of canonization in cocks (1 mark)**

-by use of the hormone / use of stilbestrol

-by implantation of female hormones under the skin of the cock.

**5 a)State four signs of infestation by external parasites in livestock (2marks)**

-Irritation of the skin

-Rough coat

-Animal looks emaciated

-Presence of parasites on the skin

 **b) Name four insect parasites in livestock (2 marks)**

-Tsetse flies

-Lice

-Fleas ; Keds

 **c) Name four vector borne diseases in livestock ( 2 marks)**

-ECF

-Red water disease

-Heart water

-Tryponosomiasis

-Nairobi sheep disease

 **6. Give two qualities of creep feed that makes it suitable for piglets (2 mark)**

i. It should be balanced in terms of nutrients

ii. It should be palatable to the animal

iii. Highly digestible

iv. Free from contaminants

v. Free from poisonous substances

**7. State two main types of roughages for livestock 1 mark**

-Dry roughages

-Succulent roughages

**8. Mention two ways in which the gizzard is adapted to its function. (1mark)**

-Equipped with tough muscles whose movement aid in mechanical digestion

-Presence of grid/ small stones

**9. State the functions of the following parts of a fish pond. (3 marks)**

**Spillway**- removing excess water from the fish pond

**Out let**- to drain water during cleaning or fishing

**Inlet** – allows water in the fish pond

 **10.A student from pavement academy saw a brown cow with a white patch on the face, legs part below the knees, below the tail switch and flank. Identify the breed of the cow.(1 mark)**

-Guernsey

 **11. State four structural requirements of a deep litter (2marks)**

-Properly ventilated

-Leak proof

-Litter on the floor

-Draught free

-Spacious

-Proper drainage

 **12. a)State animals which can be infected by anthrax . (2 marks**)

-Cattle

-Sheep

-Goats

-Man

-Wild animals

**b) What is meant by providing a feedstuff ad libitum.** **(1 mark)**

-Feedstuff provided without limit.

**c) Factors that enable ruminants to break down fibrous feed material. (1½ marks)**

 - Bacteria in rumen.

- Bacteria in caecum.

- Ability to regurgitate.

**13.Give two reasons for treating timber to the used in construction of farm buildings (1 mark)**

To make the timber durable

To prevent rotting

To prevent warping

To make them resistant to pests attack

SECTION B

14. A farmer is required to prepare 100 kg of ration of 30% digestible crude protein ( DCP) from simsim seed cake containing 50% DCP and maize meal 10% DCP. Using Pearson’s square method calculate the amount of simsim and maize the farmer requires.(3marks )

 Seed cake 50% 20 ½ mark

 30

 ½ mark

 Maize meal 10% 20 20 ½ mark

 40 ½ mark

Seed cake =20× 100=50 kg ½ mark

 40

 20 × 100 =50kg ½ mark

 40

5.The diagram below illustrates a hoof of a sheep. Study it carefully and answer the questions that follow

1. **Name the routine management practice that should be carried out on the hoof illustrated above(1 mark)** -Hoof trimming
2. State two reasons for carrying out the management practice in (a) above( 1 marks)

To facilitate easy movement

Controls foot rot disease

Prevents ram from injuring the ewe during tupping

**16.The photographs below are workshop tools. Study them and answer the questions that follow.**

1. **Identify the tools Land M (1 Marks)**

L- straight slot crew driver

M- star headed screw driver

**ii. Give the functional difference between the following tools labeled Land M. (1 marks)**

**17.Diagrams N1 and N2 below show the fingers fitted between pelvic bones as a practice used in examining layers during culling**

1. **layer would be culled (1 mark)**

NI

 **ii) Give two other characteristics that can be examined when culling. (1marks)**

* Yellow color of the shank
* Grossy smooth feathers
* shrinkle ,shrunken wattle and comb

- use of trap nets out of which layers do not come out while non layers are left out then identified and called .

- keep layers in Individual cages

**18.The illustration below shows a male reproductive system in cattle. Study it and answer the questions**

**a)Identify the parts labeled I, J, K and G (2mks)**

G – Penis

I – Urethra

J – Seminal vesicles

 K – Prostate gland

**b)Functions of F and H (1 mark)**

 F - storage of spermatozoa

 H- convey sperms to urethra

**19.The photographs labeled D and E are pig breeds. Study them and answer the questions that follow.**

**a. Identify the breeds D and E (1 Mark)**

D- LARGE WHITE

 E- WESSEX

 **b. Name the part labeled G on the diagram E 1 mark**

 Snout

 **c.** **State the main product of breed D (1 Mark)**

pork

**20.The diagram below represents roof of a building.**

**(i ) parts labeled A, B, C and D (2marks)**

A - Strut.

B - Purlin.

C - Rafter

D - Crosstie board.

**ii) State four factors considered when sitting farm buildings and structures. (4marks)**

- Security

- Accessibility.

- Nearness to social amenities.

- Direction of prevailing wind.

- Topography of the area.

- The soil type.

- Government policy.

- Future expansion.

- Farmer preferences / paranomic view.

- Gradient / drainage.

- Sewage disposal.

- Aspect

**SECTION C (40 Marks)**

1. **a i) Precautions to be observed during transportation of fingerings. (5 marks)**

**(ii) Procedure of stocking fingerlings (5 marks)**

**a) i. Precautions to be observed during transportation of fingerings.**

* Transporting containers must be very clean to avoid any infection on the fingerlings.
* Use clean water in transporting containers.
* The water temperature should be as close as possible to the recommended pond temperature. (About 100oc)
* Avoid ccausing injury to the fingerlings. Fingerlings are very delicate thus should be handled carefully during transportation. **(4 x 1) = 4 mks**

 **(ii) Procedure of stocking fingerlings**

 - Transfer the fingerlings into a small container.

 - Add pond water into the container.

 - Introduce the fingerlings into the pond by tilting the container.

 - Allow the fingerlings to swim out slowly. (4 x 1 ) = 4 marks

**b).Describe the factors a farmer should consider when selecting a heifer for breeding (5 marks)**

The heifer should be Productive .this productivity is obtained from the ancestors

The heifer should have the dairy body conformations

Choose heifer which is adaptable to the particular environment.

Use health records to select animas which are less affected by diseases.

Animals with physical defects should not be selected.

Select animals with good dairy temperament.

**c. Functions of worker bees**

Collect nectar and pollen grains gums, resin and water for making honey

Protect the colony form intruders

Feeds the queen, young bees and drone

Cleans the colony/comb, removing dead bees

Scouts for a new home when necessary

Making honey and beeswax  **(4marks)**

**22 a) Process of egg formation**

Ovary: Produces the ovum (1 mk)

**Funnel/Infundibulum:**

 - Chalazae are added and the egg moves to the magmum.

 - Fertilization takes place here

 - receives ovum (1 mk)

**Magnum:**

 - Light album is added and they yolk moves into the isthmus. (1mk)

**Isthmus:**

- Water mineral salts and vitamins are added

 - Shell membranes are also added and the eggs moves to the uterus

 - addition of albumen is completed (2mks)

**Uterus/shell gland:**

 - Shell is added around the egg/it contains calcium deposits

 - Shell pigmentation occurs here (3 x ½) (2mks)

**Vagina:**

- Egg is temporarily stored

 - Egg is inverted to be laid with the broad end fist

 - Egg is lubricated  **(2mks)**

 **(Mark correct function and with correct part-ignore the order)**

**b) Describe the management of piglets from birth to weaning. (10 marks)**

After parturition ensure that the piglets are breathing remove mucus from the nose

Ensure they are safe by moving them away from the mother as each is being born.

Place piglets under infrared light.

Weigh each piglet and record the birth weight

Ensure they are warm

Disinfect the naval cord to avoid infection.

Ensure piglets suck colostrum

Remove needle teeth

Ensure the piglets have iron by giving iron injection or iron paste.

Ensure the piglets suck as much milk as the cow can provide

Provide a lot of clean water as early as 4 days after birth

Provide creep feed at 6 weeks

Identification to be done to facilitate various practices.

Castration done through bloodless castration

Control diseases through vaccination,

Piglets are weaned at the age of 8 weeks

 **(10 x 1 ) = 10mks**

**23 a). Explain fivereasons as to why it is important of keeping livestock healthy (5 marks)**

To prevent spread of diseases to the health one or to man

To for fast growth rate

For longer economic life

Provide maximum production or performnce

Produce good quality products and command high market price

Animals are economical to keep because the farmer spends less money on medication.

**b) Procedure of harvesting honey.** **(5 mks)**

* Honey is harvested early in the morning or late in the evening when bees are less active
* Approach the hive quietly and blow smoke around the hive and later through the entrance.
* Lower the hive to the ground
* Cut combs from each top bar three centimetres.
* Place back the bars and do not disturb the brood
* Return the hive to its position.

 **(5 x 1) = 5 mks**

**c) Function of any five parts of a zero grazing unit in dairy farming. (5 marks)**

* Feed store – storage of livestock feed.
* Sleeping area – resting at night.
* Feeding area – feeding and water troughs with clean concentrates and water.
* Calf pen – handling / housing calves.
* Milking section – Milking parlour available for milking cows.
* Milk recording room – weighing milk.
* Feed preparation section – mixing of different types of feeds.

 **(10 marks)**

**1 mark for name of the part and 1 mark for explaining the function**.