**AGRICULTURE** **MARKING SCHEME PP2**

1. Physical characteristics of exotic breeds.

* Straight top line.
* Wedge/triangular shape.
* Absence of hump.
* Prominent milk veins.
* Well set hindquarters and large teats.

2.

Steer- young castrated male cattle.

Bullock- mature castrated male cattle.

3.

* Dehorning tools.
* Dehorning iron/disbudding iron.
* Dehorning wire or saw.
* Dehorning collodion.
* Caustic potash stick.
* Rubber ring and elastrator.
* Has antibodies that help resist early diseases infections.

4.

* Oxytocin.
* Adrenalin.

5.

* Signs of farrowing.
* Restlessness.
* Loss of appetite.
* Enlarge of the udder and teats.
* Sow collects bedding and build a nest.
* Enlargement of vulva.

6.

* Management practices of a heifer.
* Diseases and parasite control.
* Vaccination.
* Feeding.
* Deworming.
* Identification.
* Dehorning.

7.

* Effects of keds.
* Cause irritation.
* Damage of wool.
* Retarded growth.
* Anaemic conditions.

8.

* Characteristics of African wild bee.
* Adapted to local weather conditions.
* Highflying power hence fly for longer distances.
* Active in search of food and water.
* Vicious if manhandled.
* Resistant to diseases like Acarive and American foul brood diseases.

9.

* Cattle- calving.
* Rabbits-kindling.
* Sheep-lambing.
* Goats- kidding.

10. Routes for vaccination.

* Nose.
* Mouth.
* Cloaca.
* Skin.

11. Candling abnormalities.

* Double yolk.
* Broken egg shell.
* Hair cracks.
* Blood/meat spots.

12. Advantages of natural incubation.

* Low marginal cost.
* Requires less skills.
* Suitable for small scale farmers.
* Less laborious since it does not involve egg turning.

13. Diseases causing micro-organisms.

* Bacteria.
* Virus.
* Protozoan.
* Fungi.

14. Factors that determine amount of water taken by a dairy cow.

* Animal requires more water during hot season due to sweating.
* Type of feed eaten by the animal.
* Level of production
* Weight of the animal or the body size.

15. Dual purpose breeds in sheep.

* Corriedale.
* Hampshire Down.
* Romney marsh.

16. Parts of a piggery.

* Feed store.
* Record room.
* Water trough/drinking nipples.
* Running yard.
* Pig pens: gilt, boar, in pig, weaner, fattener pig pen.

17.

* Increase in the number of offspring per female.
* Easier and more rapid exchange of genetic material between countries.
* Less transport of live animals, thereby reducing risks of disease transmission.
* Storage and expansion of rare genetic stock.

18.

* Milk fever.
* Anaemia.
* Paraketosis.
* Oestomalacia.
* Grass tetany/stagger/hypomagnecia.

19. Physiological body functions that indicate illness.

* Abnormal appetite.
* High /low body temperature.
* Abnormal defecation.
* High/low respiratory.
* Abnormal colour of the urine/frequent urination.

**SECTION B**

20. (a)

Maize = 20 x 180 = 120kg

30

Sunflower = 10 x 180 = 60kg

30

b) - Age of the animal

- Cost of feedstuff

- Type of animal whether ruminant or non-ruminant

- Nutrient requirement of the animal

- Availability of feedstuff

21. (a) Ear notching

(b) 5 + 3 + 2 + 50 + 30 + 20 = 110 (must show the working)

(c) (Any other combination unacceptable)

(d) Prevents sow from crushing the piglets

22. (a) E – There is draught from the side directly opposite where the chicks have

crowded.

F – Its very cold in the brooder chicks crowd around heat source

G – Too much heat making chicks move far away from heat source

(b) To avoid overcrowding at one point which may lead to suffocation.

23. (a) K – alveoli L – gland cistern

(b) Oxytocin Adrenalin

**SECTION C: (40 MARKS)**

24. a) - Wedge/Triangular shaped.

- Big stomach to store more food

- Large well-developed udder and teats

- Well set hind quarters to allow room for big udder

- Long thin neck and small head

- Lean body with little flash

- Large milk veins and milk wells

- Straight top line

- Long thin legs

- Prominent pin bones

(b) (i) Regulates body temp

- Transportation of nutrients

- Component of body cells and fluids

- Make cells turgid

- Used in biochemical reactions

- Helps in excretion of waste products

- Forms part of animal products.

(ii) - Produce high power

- Have efficient fuel and oil utilization

- Performs wide range of farm operations

- Engines are efficiently cooled with water

- Exhaust gases are effectively expelled

25. (a) - Age of the animal: old animals produce milk with low butter fat content

- Stage of lactation: butter fat content is high in the middle phase of lactation

- Completeness of milking: Last drawn milk from udder has higher butter fat content.

- Season of the year: butter fat content increases during cold season.

- Type of food eaten: food rich in roughages are richer in butter fat content.

- Animals health: mastitis reduces butter fat content leading to watery milk

- Breed – Jersey produce milk with more butter fat content

- Physiological condition: Last stage of pregnancy has milk with lower butter content

- Nutrition: Mexican marigold and silage taints milk if fed before milking.

(b) - Wrong timing of service

- Low quality/expired semen

- Poor skilled veterinary officer

- Infertile cow

- Blocked fallopian tubes/oviduct

- Hormonal imbalance

- Disease infection e.g., brucellosis

(c) - Cost of the material

- Durability

- Workability

- Toxicity of materials to workers/animal

- Farmers taste and preferences

- Type of zero-grazing unit

- Availability of skilled labour

- Capital available

- Suitability

- Environmental conditions

26. (a) (i) Cows/Nannies/sows that have recently given birth

(ii) Low calcium levels in blood leading to increase in magnesium and sugar levels.

(iii) – Muscular twitching causing animals to tremble

- Staggering as the animal moves

- Animal lies down on its side and whole body stiffens/neck twisted

- Body functions e.g., urination stops

- Stomach contents drawn to the mouth

- Complete loss of appetite/anorexia

- Dullness

- Animal falls down and becomes unconscious

(iv) Control

- Partial milking for first 10 days

- Intravenous injection with calcium salts

- Feed the animal with diet rich in calcium and phosphorus

- Giving high doses of vitamin D

(b) AI

- Semen of a bull can be used even after its death

- Heavy bulls can produce semen to serve

- Controls breeding diseases

- Prevents inbreeding

- Eliminates dangerous bulls in the farm

- Useful as a research tool

- Easier and cheaper to transport semen that a bull

- Quicker method to obtain a proven sire

- Semen from one superior bull can serve many cows

- Saves costs of rearing a bull

- Controls breeding