**443/2**

**AGRICULTURE**

**PAPER 2**

**MARKING SCHEME**

**SECTION A**

1. - Difficult to control pests and diseases.

* Overgrazing due to overstocking.
* Disputes occur.
* Poor quality animals.
* No land improvement.
* No controlled breeding.
* Little benefit from extension advice.

1. **a)** Spoke shave – to smoothen curved wood surfaces.
2. Pipe wrench –for holding, tightening and loosening metallic pipes.
3. Stock and die – for cutting threads on metal pipes.
4. Wire strainer – for tightening fencing wires when fencing.
5. **a)** Jersey.

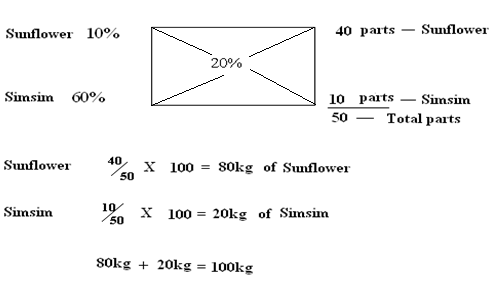
**b)** Friesian.

1. - Sahiwal.

* Red poll.
* Simmental.

1. - Whole grain of wheat / barley / maize.

* Sugarcane by-products e.g. molasses.
* Flour mill by-products.
* By-products from breweries.



1. - East Coast Fever (E.C.F) / gall sickness.

* Heart water.
* Red water.
* Nairobi sheep disease.

1. - Tapeworm – pig/cattle

* Liver fluke – water snail.

1. - Facilitates mating / tupping.

* Gives uniform fat distribution in the body.
* Prevents blowfly infestation.
* Prevents soiling / fouling.
* Prevent contamination of the urinary tract.

1. - Lay fertile eggs.

* Produce pheromones to keep the colony intact.

1. - Change bedding materials regularly.

* Repair broken parts.
* Avoid dumpness.
* Clean regularly.

1. - Require regular charging.

* Expensive to construct and maintains.
* Less effective when it contacts vegetation.
* Is quite dangerous to farmers.

1. - Less labour is required.

* Spraying is faster.
* Animals cannot swallow the acaricide solution.
* Avoids wastage of acaricides / Requires less acaricide.
* Is most suitable for sick, pregnant and young livestock.

1. - Harmful characteristics spread quickly by one bull.

* Requires skilled labour.
* Low chances of conception due to death of semen (sperm cells) during long storage.
* Its labourious.

1. - Easy to clean.

* Dry and warm.
* Well ventilated.
* Well drained.
* Spacious.

1. - Does not conceive after several services.

* Has no heat signs.
* Prolonged heat period.
* Produces abnormal discharge from vulva.

1. - Orally / through mouth.

* Through the eyes.
* Through the cloaca.
* Injection.

**SECTION B**

1. **(i)** A – Ovary.

B – Funnel / infundibulum.

C – Magnum.

D – Isthmus.

E – Uterus.

**(ii)** A – Secretes hormone oestrogen.

* Releases the ovum / yolk.

B – It’s where fertilization takes place.

C – Addition of thick albumen.

D – Addition of shell membranes.

E – Addition of egg shell.

* Shell pigments are added.

1. - Requires less food.

* Hardy.
* Adapted to high temperatures.

1. **(a)** Cattle dip / plunge dip.

**(b)** X – Foot bath.

Y – Roof.

Z – Silt tank.

**(c)** Wash / remove mud from animal’s feet.

Control foot rot.

1. - Control foot rot disease.

* Facilitate easy movement.
* Prevent injury to the ewe during /Tupping.

1. **(a)** Fish pond.

**(b)** K – Inlet channel.

Q – Spillway channel.

Z – Outlet channel.

**(c)** - Feed the fish daily.

* Fertilise the pond twice per week.
* Maintain the water level.
* Repair the leaking point.
* Clean and remove foreign materials.
* Plant grass on the walls to control erosion.
* Proper fencing to keep off predators.
* Avoid polluting the water.

**SECTION C**

1. **(a)** - Promote growth.

* Help in blood clotting.
* Help in muscular activities.
* Prevent diseases in livestock.
* Act as organic catalysts.
* Help in bone formation.

**(b)** - Highly digestible.

* Highly nutritious / high nutrient value.
* Imparts resistance to calves / contains antibodies.
* Has laxative effect / cleans the calve’s bowels.
* Is highly palatable.

**(c)** - Cost of importing embryos is much less than importing a whole animal.

* Highly productive heifers can be spread over a large area in a short period.
* Embryos can be stored awaiting availability of a recipient heifer or cow.
* Stimulates milk production in a female that was otherwise not ready to produce milk.
* Cow / heifer can produce an average of 12 – 15 calves per year.

1. **(a)** - Root catchment.

* Rock catchment.
* Wells and dams.
* Ponds.
* Retension ditches or level terraces.

**(b)** - Triangular / v-shaped bunds approximately 25cm built with soil from excavated plantingholes to direct run-off water towards the basin area around the base of each plant.

* Semi-circular bunds – around the growing plant to help hold water around the plantwhen it’s still young.
* Trapezoidal bunds – a closed large area where crops are grown.
* Contour bunds / furrows – made along contours or ridges made from buds where cropsare planted.
* Planting in the holes / pits made and filled with dry planting materials before filing withsoil, seedlings then planted in the middle of the hole.

**(c)** - Encourages development of natural vegetation around water conservation areas.

* Support tree growing in degraded lands e.g. overgrazed / overcrowded areas.
* Make agroforestry possible where water is not available for irrigation by conserving littlerain water received.
* Help the soil to hold water for a long period near the roots of the growing plant.
* Reduces continous watering of plants as water collects in a basin around the plant base.

1. **(a)** - Good body conformation.

* Healthy stock without chronic diseases.
* Fast growth rate.
* Good temperament.
* Young in age.
* Have twelve functional teats.
* Free from hereditary diseases.
* High prolificacy.
* Good mothering ability.
* Good adaptability.
* Strong feet / legs.
* High carcass quality / dressing percentage.
* Suitability to the enterprise (pork or bacon)

**(b)** - Suck blood from host causing anaemia.

* Lower productivity.
* Weaken the host animal.
* Lower the quality of products.
* Make products unfit for human consumption.
* Expensive to control / lower profit margin.
* Cause diarrhoea.
* Cause irritation / scratching.
* Cause physical obstruction of internal vessels hence death.
* Transmit diseases to livestock
* Lead to general emaciation.