

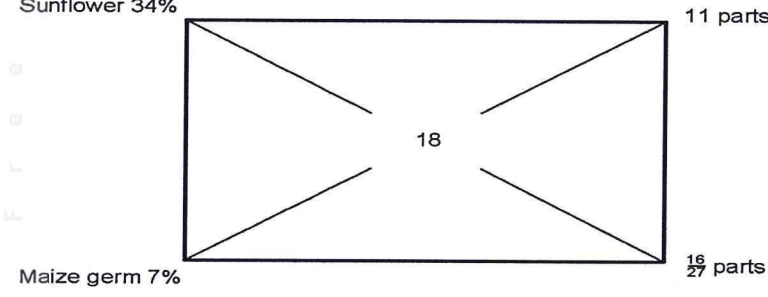
4.15.2 Agriculture Paper 2 (443/2)

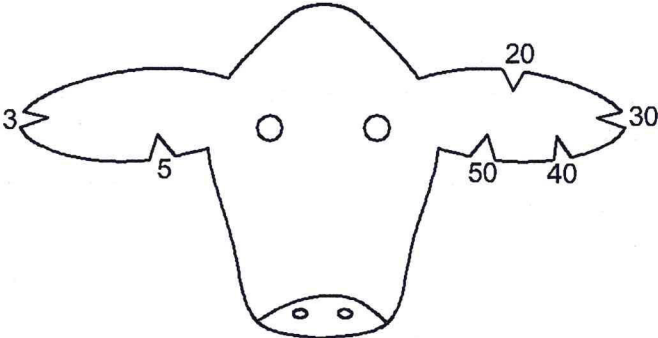
| | | | |
|----|--|--------------|------------|
| 1. | a) – Young; - Healthy; - Prolific; - High performer/yielder; - Free from physical deformities; - Fertile; - Proper body conformation; - Adapted to local conditions; - Good mothering ability; | (6 x ½ mark) | (3 marks) |
| 2. | - Ensure efficiency; - Make them durable; - Reduce replacement costs; - Avoid injury to the user; | (4 x ½ mark) | (2 marks) |
| 3. | - Highly digestible; - Highly nutritious; - Contains antibodies which boost immunity; - Has laxative effect; - Highly palatable; | (4 x ½ mark) | (2 marks) |
| 4. | - Stabilize the banks; - Attract insects which lay eggs that hatch into larvae for fish food; | (2 x ½ mark) | (1 mark) |
| 5. | - Free range; - Deep litter; - Fold; - Battery cage; | (4 x ½ mark) | (2 marks) |
| 6. | - It is possible to compare animals of different age groups; - Eliminates differences due to environmental factors; - It is possible to compare bulls of different artificial insemination centres; - It is accurate; | (3 x ½ mark) | (1½ marks) |
| 7. | (a) Close breeding:- Breeding of closely related animals; (b) Line breeding:- Mating of distantly related animals that share a common ancestry; (c) Out crossing:- Mating of unrelated animals within the same breed; (d) Cross breeding:- Mating of two animals of different breeds; | (4 x ½ mark) | (2 marks) |
| 8. | - Vaccination; - Deworming; - Hoof trimming; - Spraying; - Dehorning; - Treatment/injection; | (4 x ½ mark) | (2 marks) |

| | | | |
|-----|---|--------------|---------------------------|
| 9. | (a) - Friesian; (b) - Guernsey; (c) - Jersey; | (3 x ½ mark) | (1½ marks) |
| 10. | (a) Crutching :- Cutting of wool around the external reproductive organ of a female sheep to facilitate mating while Ringling :- Trimming of wool around the sheath of the penis in rams to facilitate mating; (b) Tapping :- Act of mating in goats and sheep; Serving :- Act of mating in cattle and pigs; | | (1 mark) (1 marks) |
| 11. | - Conditions which lead to the animal contracting a disease; | | (1 mark) |
| 12. | - Fertile (has germinal disk; black spot); - Free from blood spots; - Large air space; - Free of hair cracks; - Free of excessively porous shell; - Free of broken shells; | 4 x ½ | (2 marks) |
| 13. | - Floor; - Ceiling; - Door; - Windows; | 4 x ½ | (2 marks) |
| 14. | - Starring coat; - Eggs and parasites seen in faeces; - General emaciation; - Diarrhoea; - Pot-bellies; - Anaemia; - Anorexia; - Dehydration/pale mucosa; | 4 x ½ | (2 marks) |
| 15. | (a) Rip saw: - cuts along the grain of wood. Cross-cut saw – cuts across the grain of wood; | | (1 mark) |
| | (b) Wood chisel – cutting grooves/chopping rough wood surface; Cold chisel – cutting thick sheets of metal. | | (1 mark) |
| 16. | (a) Conditions inside or outside the animal body which make it to contract a disease; | | (1 mark) |
| | (b) Is the duration between the time of infection and the time the first symptoms show up; | | (1 mark) |

SECTION B (20 marks)

| | | |
|-----|---|---|
| 17. | <p>(a) Tapeworm;</p> <p>(b) (i) Ingestion of bladder worm;</p> <p>(ii) Ingestion of eggs (proglottids) passed in human faeces during grazing/feeding;</p> <p>(c) – Use of antihelmintics/deworming to kill endo-parasites;</p> <ul style="list-style-type: none"> - Proper hygiene in the unit; - Proper use of latrines to prevent contamination by infected faeces; - Proper cooking of meat to destroy bladder worms; - Use of clean feed, feeders, water and waterers to prevent contamination; | <p>(1 mark)</p> <p>(1 mark)</p> <p>(1 mark)</p> <p>(2 marks)</p> <p>2 x 1</p> |
| 18. | <p>(a) Disc plough;</p> <p>(b) H – Beam;</p> <p>J – Lower link attachment point;</p> <p>(c) Counteracts the thrust by the discs to balance the plough;/helps to adjust the depth of ploughing;</p> <p>(d) The discs are able to roll over obstacles;</p> | <p>(1 mark)</p> <p>(1 mark)</p> <p>(1 mark)</p> <p>(1 mark)</p> <p>1 x 1</p> <p>1 x 1</p> <p>(1 mark)</p> <p>(1 mark)</p> |

| | | |
|-----|---|-------------------------------|
| 19. | <p>Sunflower 34%</p>  <p>Maize germ 7%</p> <p>11 parts</p> <p>18</p> <p>16/27 parts</p> <p>Sunflower $\frac{11}{27} \times 200 = 81.48\text{kg};$</p> <p>Maize germ $\frac{16}{27} \times 200 = 118.52\text{kg};$</p> | <p>(5 marks)</p> <p>5 x 1</p> |
|-----|---|-------------------------------|

| | | |
|-----|---|--|
| 20. | <p>(a) Ear notching; (b) 155; (c)</p>  <p>(d) – The notching is painful to the animal; - Notched wounds cause secondary infections;</p> <p style="text-align: right;">2 x 1</p> | <p>(1 mark) (1 mark)</p> <p style="text-align: center;">(1 mark)</p> <p style="text-align: center;">(2 marks)</p> |
|-----|---|--|

SECTION C (40 marks)

| | | |
|-----|---|--|
| 21. | <p>(a) - Provide the broody hen with a nesting box which should be spacious to allow movement of the hen; - Provide nesting material in the nesting box to maintain warmth; - Provide the broody hen with 10 – 15 eggs; - Keep the nest in a dry; and well-ventilated area; - Provide the hen with balanced feed and water; - Dust the hen with appropriate insecticides to control external parasites; - Allow the hen to go out at least once to exercise and feed; - Do not disturb the hen when the eggs start hatching;</p> <p style="text-align: right;">8 x 1</p> | <p style="text-align: center;">(8 marks)</p> |
| | <p>(b) - Provide adequate floor space, feeders, and waterers; - Provide litter on the floor up to 15cm deep; - Provide growers mash adlib; - Provide plenty fresh water; - Dust the birds with appropriate insecticides to control external parasites; - Keep the litter dry to avoid dampness; - Provide grit or oyster shells towards the end of growers stage/at 12 weeks; - Gradually introduce layers' mash from the 16th week until it completely replaces growers' mash at 18th – 19th week.</p> <p style="text-align: right;">(5 x 1 mark)</p> | <p style="text-align: center;">(5 marks)</p> |
| | <p>(d) - Human power:- Working directly or utilizing their capacity of organization; - Animal power e.g. donkeys, oxen camels for cultivation and transportation; - Wind power e.g. for winnowing, pumping water and turning turbines; - Water power e.g. driving turbines to produce HEP driving maize grinding mills and pumping water;</p> | |

| | | | |
|-----|---|-------|-----------|
| | <ul style="list-style-type: none"> - Biomass e.g. Biogas, wood or charcoal; - Solar radiation in photosynthesis, drying crops, generate electricity, etc; - Electric power from geothermal, hydropower and nuclear stations, battery; - Fossil fuel:- petroleum, coal, natural gas, etc; - Tractor:- Burns petrol or diesel to produce power which is transmitted and used in different ways; <p>7 x 1</p> | | (7 marks) |
| 22. | (a) (i) - Bacteria/virus/ <i>Mycoplasma mycoides</i> ; - Dust and worms in the lungs; | 1 x 1 | (1 mark) |
| | (ii) - Calves; kids; lambs; piglets; poultry; | 2 x 1 | (2 marks) |
| | (iii) - Poor ventilation; - Overcrowding; - Age- young animals; - Diarrhoea and other illnesses; | 2 x 1 | (2 marks) |
| | (iv) - Dullness; - Loss of appetite; - Starring coat; - Emaciation; - Rapid breathing; - Fluctuating body temperature; - Nasal mucous discharge; - If chest is pressed, animal starts coughing; | 5 x 1 | (5 marks) |
| | (v) - Keep young animals in warm houses; - Proper sanitation; - Isolation; - Treatment using antibiotics; | 3 x 1 | (3 marks) |
| | (b) - Concrete/slatted floor to facilitate cleaning; - Spacious to allow exercise, feeding and watering; - Single housing to prevent licking of one another/ skin infections and spread of worms; - Well lit to facilitate synthesis of vitamin D; - Well drained to prevent dampness which predisposes the calf to infections; - Free from draughts: Solid on the wind ward side to prevent entry of cold winds; - Leak proof to avoid dampness/wetness which encourages infections; | 7 x 1 | (7 marks) |

| | | |
|-----|---|-------------------------------|
| 23. | <p>(a) - Restlessness;</p> <ul style="list-style-type: none"> - Mounting others and stands still when mounted; - Slight rise in temperature; - Slight drop in milk yield; - Vulva swells and becomes reddish; - Clear or slimy mucus discharge from vagina; - Frequent mowing; | <p>5 x 1 (5 marks)</p> |
| | <p>(b) - Suitable for pregnant and sick animals;</p> <ul style="list-style-type: none"> - Animals do not swallow the acaricide wash; - Spraying is faster; - It is less laborious; - Acaricide wash is not wasted as it is recycled; | <p>5 x 1 (5 marks)</p> |
| | <p>(c) - Healthy animals grow fast and mature early;</p> <ul style="list-style-type: none"> - Animals give a longer productive life; - Produce good quality products; - Give maximum production/performance; - Prevent spread of diseases; - Healthy animals are economical to keep; | <p>5 x 1 (5 marks)</p> |
| | <p>(d) - Body size or weight of the animal; large animals eat more food;</p> <ul style="list-style-type: none"> - Environmental conditions where the animals is; animals in cold areas require more food; - Physiological condition of the animal; lactating animals require more food; - Level of production:- High producers also require more food; - Purpose for which the animal is kept; animal kept as a pet requires less food than the one kept for production or performance; | <p>5 x 1 (5 marks)</p> |