AGRICULTURE PAPER 2

1. Uses of litter

i) Keeps the poultry house warm – Absorbs moisture

ii) Provides bedding for poultry (any 2 correct 1mk ½ x2)

2Spread of infectious diseases

i) Through vectors

ii) Ingestion of contaminated feed & water

iii) Through contact

iv) Through inhalation of contaminated air (3 ½ mks

3. Wessex saddleback has a black body with the shoulders and only the front legs white while Berkshire is Black with white colour on the feet nose and tail. (1mk) mark as a whole.

4.i) Lay 1 introduce plant, seeds into the ground in a precise manner in rows

Open a drill/hole, cover the seed, and place 1 tray fertilizers/manure in the drill/holes

(any two (1 mark ½ x2)

b) With a draw bar, through a three point hitch (2x ½ 1mk)

5. Foot rot, Anthrax, contagious abortion, Pneumonia (2x ½ mk)

6 Reciprocating & Gyromower/Rotary.

7. Quarantine – Restricts movement of injected stock/livestock products, obviating their chances of mingling with and transmitting to healthy stock. (1mk)

Prophylaxis – Prepare the animals' body's immune system to combalt likely injection. (1mk)

8. Dips, spray race, livestock houses, zero grazing units fences (½ x4=2)

9. Their bites causes irritations, transmit disease as spirochaetusis/bubonic plague, suck blood causing anemia, their bites create routes for secondary infection, their bites damages or lower the quality of the skin (½ x2=1mk)

10. Herefold, Aberdeen Angus, Galloway short horns (½ x2=2mk)

11. Temporary storage of food and moistening food (½ x2=1mk)

12. To avoid poisoning of some chemicals as lead that may be in the paints, to discourage insects from inhabiting the shed, to avoid tainting of milk if the shed is used immediately after painting. ½ x2=1mk)

13.

Description	cattle	pigs	Poultry
Young from birth/hatching to weaning	calf	piglet	chick
Young females before first parturition	heifer	Gilt	pullet

Mature male for breeding	bull	boar	cock	(½ x9=4 ½ mk)

14.a) Bastard file and Rasp file

Bastard file is used for smoothing metal while a rasp file is used for smoothing wood

b) Copying saw and hacksaw – copying saw is used for cutting curves on wood while a hacksaw is used for cutting metal or plastics(mark as whole) 1x2=2mks)

15.a) Proper ventilation for air/oxygen circulation for embryonic gaseous exchanges, for air circulation to control humidity

b) Relative humidity for

i) low humidity causes embryonic mortality due to loss of moisture

ii) High humidity produces abnormal bigger chicks which look marshy end up dying.

16.Are tolerance to high temperature, have considerable tolerance to tropical diseases, can walk for long distances in search of pastures and water, have ability to survive on poor quality pastures, are able to survive on less amount of food & water without seriously affecting their performance. (½ x2=1mk)

17. Very high initial capital required for installation if the market is not large, it becomes uneconomical to install, water supply can become unreliable incase of prolonged drought. The river may change the course leaching to wasted investment, Not all farmers can afford the use of electric appliances, lack of skilled personnel, lack of rivers on individual farms. (½ x4=2mks)

18.a) class of

i) molasses – Energy concentrate(Reject concentrate alone (½ x1= ½ mk)

ii) Maclick Super – mineral supplement (½ x1=1mk)

b(i) Y- Tsetsefly (Accept Glossina spp)(½ x1=1mk)

Z – Tape worm (½ x1= ½ mk)

ii) Organ in which parasite Z is found – small intestines/ileum – Accept intestine (1mkX1=1)

iii) How parasit z is passed from livestock to humans

- By eating infected raw meat/ Eating improperly cooked meat. Reject eating infected meat(1 mkx1=1mk)

C) Control measures of

- I) y- bush clearing spaying bushes with appropriate Trapping and killing tsetse flies, sterilizing males with sterilizing agents and releasing them into the wild.(Any 2x1/2 mk=1 mk)

Ii) Z- Disposal of sewage to a safe distance away from livestock grazing fields/farm hygiene

- Application/ administration of antihelmintic drugs
- Eating throuhly cooked meat
- Buy inspected meat

19. a) Uses of ahpodermic syringe and aneedle

i) Injecting medicine/ vaccination

ii) Extracting blood samples for laboratory analysis(2x1/2 mk=1 mk)

b) Closed and open methods of costration closed method also referred to as bloodless method involves use of burdizzo or rubber ring and an elastrator to cut the spermatic cods while open methods involves surgical removal of testicles mark as a hole.(1 mkx1=1)

c) Progeny testing vs mass selection

i) Progeny testing is important where the trai is not measurable in mature animals of both sexes but only expressed in one sex eg milk production.

ii) It is important where heritability of a trait is low or weak.

iii) It is most valuable where the breeding unit large.

iv) It is important where the increased in generation interval implicit in the methods is not toi pronounced.(2x1 mk=2 mks)

20. a) Animal drawn moul board plough Reject mould board plough.(1x1mk=1mk)

ii) Pi- Handle grips.(1/2 mk)

P2- land side reject land slide(1/2 mk)

P3- plough share(1/2 mk)

iii) Increasing depth of cultivation

- Raise depth wheel; sharpen share; increases angle and which share point the ground(1/2 mkx2=1 mk)
- B i) Identification of tools
- T1- secaters/ hand pruner
- T2- Pruning knife
- T3- budding knife
- B) Use of tool T1
- In gardening/ floner pruning, pruning soft pranches of coffee/ citrus.(1/2 mkx1=1mk)
- C) Enable growth of crops out of season, protects crops against adverse weather condations; used for research work; used for easy control of pests and diseases.(1/2 mk=1 mk)

D) Chemicals used in wood preservation

- Engine oil/ old engine oil, tribuly tin oxide creosote, tar, tanex, copperii sulphate.
- 21. Factors causing swarming of bees
- I) Lack of food and water in the environment
- Ii) Sick of infertile Queen
- Iii) Pest and disease
- Iv) Presence of more than one queen in the hire.
- V) Overheating by the sun
- Vi) Damage of combs brood
- Vii) Bad smell in the area
- Viii) Overcrowiding of bees(any 4x1/2 mk=2 mks)

B) Afingerling

- A young one of a fish for rearing.

SECTION C- 40 MARKS MARKING SCHEME

22. A) Procedure followed when hand spraying cattle to ensure effective use of acaricides to control ticks.(8 mks)

- Spray the entire backline from the shoulder to the tail.

- spray the sides in a zigzag motion trap and retain the wash from the backline.

-spray the scrotum, udder and the hind flanks carefully.

- Spray both hind legs up and including the head.

- spray under the tail head and the area around the anus & vulva.

- Hold the tail switch on to the ramp and spay it thoroughly to ensure complete wetting.

- Spray the inside of the ears total 10 mks max 8 points-8mks. In the right procedure

22. b) Maintenance practices on a farm tractor

-using a dip stick to check the oil level in the sump.

-check the fuel tank to ensure there is adequate fuel for a day's work.

- Check the level of the electrolyte in the battery adjust accordingly.

- Grease/oil moving parts.

- check fan belt, tension and conditions and adjust accordingly.

- check water level in the radiator and top up if necessary.

- check air cleaner to ensure that there is no dirt check level of oil.

-Tighter bolts, nuts and pins.

- open and remove dirt from the sediment bowls.

(any 7x1 mk=-7mks)

c) Five reasons for maintain farm tools equipment and machinery

- Reduce cost of replacing them

- increase their efficiency

- prevent injury to the user

-increase their resale value (1 mkx 5=5 mks)

23. i) Definition of cannibalism

-It is when birds peck at the skin of another and devour its flesh.(1 mk)

ii) Types of cannibalism

-Toe pecking, vent pecking, feather pecking

(1 mkx2=2mks)

iii) Causes of cannibalism

Boredom, chicks reared in confinement without the mother, congestion, high stocking rates, bright high in poultry house, birds which take too long to form features interruption of pecking order where new birds are introduced in an already existing flock, moulting in some birds, lacking of enough food, balanced diet, presence of external parasites on combs, wattles etc of other birds lacking of guidance of mother of chicks to guide them feed at more rewarding substrates.(1 mkx 8=8mks)

iv) Control of cannibalism

- Avoid bright light in the brooder e.g by covering windows with gunny bags.
- -Avoid over crowding ie have proper stocking rates/ giving enough space.
- -provide a balance diet
- - keep birds according to age group
- - control external parasites
- -keep birds busy by hanging green leaves 60cm above the litter.
- - De- beak (hens which perpetually peck at other)
- - cull perpetual cannibals
- -Realing chicks with access to perches by four weeks of age.

- Keep birds of the same age/hatched at the same time together throughout growth period.
- Cull/ isolate birds that take to long to develop features(1 mk x 9=9mks)

24. A) Factor (10) considered when selecting livestock for breeding

- I) Age- select young animals since they have a longer production life
- Ii) Level of production- select animals with the highest level of production for they will give more products
- Iii) Quality of products- select animals with high quality products for they will attract consumers.
- Iv) Health- select animals resistance, select animals that are free from deformities
- V) Body/ physical conformation- select animals that are true to type/with body conformation typical of the type/purpose for which the animal is kept e.g. wedge/triangular shape for dairy cattle.
- Vi) Temperament/Behaviour – select animals with calm temperament/cool disposition and behavior e.g. docile since such animals are easy to handle.
- Vii) Prolificacy- select animals with a history of producing a large litter sizes at a time.e.g. in pigs & rabbits.
- Viii) Mothering ability – select animals that show natural instinct to take care of the young so, they can rear their young ones upto weaning.
- Ix) Fertility – select fertile, regularly breeding animals e.g. cows/heifers that show definite heat signs.
- X) Adaptability- Select animals well adapted to the local conditions of temperature, humidity e.t.c
- Xi) Growth rate- select animals with a faster growth rate i.e. early maturity-correct listing
- (½ x10=5mks, Explanation ½ x10=5mks Total 10mks)

- 24.b) Describing the working of four strokes in a petrol Engine
- I) Induction stroke
- Piston moves downwards, creating a partial vacuume on the upper part of the cylinder (TDC)
- The partial vacuum causes the inlet valve to open
- The open valve sucks\lets in fuel air mixture in the cylinder
- The exhaust valve remains closed

Ii) Compression stroke

- The inlet valve and exhaust valves are closed
- The piston moves up the cylinder
- The air fuel mixture iis compressed in the upper part of the cylinder.

- Iii) Power stroke
- The piston reaches upper most portion of the cylinder
- At this point the fuel air mixture is fully compressed
- The spark plug produces a spark igniting the fuel air mixture
- The ignited mixture expands generating pressure that forces the piston downwards thus generating power.
- The inlet and out let valves remains closed

- Iv) Exhaust stroke
- The exhaust valve opens while the inlet valve remains closed
- The piston moves up the cylinder and forces out the exhaust gases.
- NB/ Should mention whether the valves are closed or open, the position of the piston and what is happening at every stroke in the above order (20x ½ mks=10)