MARKING SCHEME
AGRICULTURE FORM 3 PAPER 2

1. Apiculture is keeping of bees in a beehive while aquaculture is rearing of fish in fish ponds.
(1 x 1 = 1 mk) Mark as a whole

2.
- Fencing around the fish pond using strong wire mess.
- Providing a screen above the pond to guard against birds. (½ x 3 =1 ½mk)

3.
a) Brown ear tick - E.C.F (½ mk)
b) Tsetse fly - Trypanosomiasis. (½ mk)

4.
a) It's a preventive treatment that gives the animal immunity against certain disease. (½ mk)
b) Application of chute at the belly of a ram to check for fertility of the animals. (½ mk)

5. Water / Mud snail. (½ mk)

6.
- To fertilize the queen.
- Control temperature of the hive / cool the hive. (½ x 2 = 1mk)

7. California white.
- Earlops
- Flemish giant.
- Chinchilla
- New Zealand white. (½ x 4= 2mks)

8.
- Grow fast and well enough to reach maturity quickly
- To have a longer economic and productive life
- Give maximum production / performance since they maintain high productivity
- To produce good quality products thus fetching high market value
- Not to spread diseases to either other animals or human beings
- Are economical and easy to keep. (½ x 4 = 2mks)

9.
- Orally through the mouth.
- Through the cloaca.
- Inhaling through the nose.
- Internal injection. (½ x 4 = 2 mks)

10.
- Water availability.
- Flowers availability
- Sheltered place.
- Away from human beings and livestock.
- Away from disturbance e.g. loud noise. (½ x 4 = 2 mks)

11.
- Mites
- Spiders
- Ticks (1 x 2 = 2 mks)

12.
- Lack humps.
- Have low tolerance to high temperatures.
- Highly susceptible to tropical diseases.
- Have fast growth rates lending to early maturity.
- Good producers of both meat and milk.
- Have short calving interval. (½ x 4 = 2 mks)

13.
- They protect the farmer and livestock from predators.
- They help to control livestock diseases and parasites.
- Provide shelter against extreme weather conditions.
- Provide storage of farm produce and other variable inputs.
- Increase efficiency of production and management in the farms. (½ x 4 = 2 mks)

14.
- Obstruction of oesophagus due to bulky food particles.
- Abnormal pressure exerted on the oesophagus by a swelling in the wall of the chest.
- Indigestion due to paralysis of the rumen and value at entrance. (1x2= 2mks)

15.
- Guernsey
- Jersey
- Arshire
- Friesian (½ x 4 = 2 mks)

16.
- High carbohydrates content.
- Low protein content.
- High fibre content.
- They are bulky.
- From plant origin. (½ x 4 = 2 mks)

17.
- Physical causes.
- Nutritional causes.
- Chemical causes.
- Pathogens causes. (½ x 4 = 2 mks)

18.
- Sharpening tools after use
- Cleaning tools after use (1 x 2 = 2 mks)

19. a) Scalpel. (1x1= 1mk)
b) Cold chisel (1x1= 1mk)

20.
a) Hoof-trimming (1x1= 1mk)

b)
- Facilitate easy movement
- Control foot rot
- Easy mating (1x2= 2mks)

c)
- Hoof clipper/cutter
- Trimming knife
- Hoof rasp (1x2= 2mks)

21. a)
- Temporary storage of food.
- Moistening of food . (1 x 1 = 1mk)

b) Produces gastric juices which contain enzymes and Hydrochloric Acid. (1 x 1 = 1mk)

c)
- Has tough muscles which slide sideways to grind food into paste.
- Has girt / sand which help in grinding of food. (2 x 1 = 2mks)

d) Debeaking. (1 x 1 = 1mk)

22. a) Barbed wire fence. (1 x 1 = 1mk)

b)
A - Intermediate posts (Standards)
B - Dropper
C- Strainer / struts.
D - Diagonal wire brace (1 x 2 = 2mks)

23.a)
P - Adjustable spanner.
M - Pipe wrench (½ x 2= 1mk)

b) Can be adjusted to fit any nut or bolt. (1 x 1 = 1mk)

c)
M - for holding, tightening and loosening metallic pipes.
N - Used for cutting P.V.C pipes. (1 x 2 = 2mks)

d)
- Store properly after use.
- Oil moving part. *($^1/_2$ x 2 = 1 mk)*

24.
a)
- One bull may serve many cows thereby increasing usefulness of a bull.
- Prevents spread of breeding diseases rej. Diseases only.
- Possible to make use of a bull that cannot serve naturally due to injuries or too heavy.
- Reduces expenses to a farmer because does not have to own a bull.
- Easy to control inbreeding.
- Semen can be stored for a long time even after death of the bull.
- Easy to control breeding.
- Eliminates dangerous bulls from the farm.
- Useful research tool in studying large number of daughters from a single sire.
- Prevent large bull from injuring small cows
- Reduce expenses of keeping a bull on pasture veterinary bills. (1x10= 10mks)

b) Restlessness
- Enlarged or swollen vulva
- Clear mucus discharge from the vulva
- Slackening of the pelvic muscles or the relaxing of hip muscles
- Full and distended udder
- Thick milky fluid comes out of teats
- Water bag appears and bursts, just before lambing (5 x 1 = 5mks)

c)
- They cause anaemia
- Deprive the host of food
- Cause injury / damage to body tissues

- Cause irritation as they migrate from one organ to another
- Cause obstruction of internal organs
- Emaciation
- Pot bellies
- Staring coat (1 x 5 = 5mks)

25

a)

- Ensure they are fed with creep feed.
- Spray with appropriate insecticide to control external parasites.
- Deworm with appropriate antiheimenthies to control internal parasites.
- Provide plenty clean water.
- Cut the tail.
- Vaccinate against apparent diseases.
- Isolate and treat the sick.
- Keep proper records.
- Carry out teeth clipping.
- Control anaemia by iron injection.
- Ensure they suck colostrums immediately after birth.
- Remove and dispose after birth / still births.
- Place the piglets under warm conditions.
- Provide furrowing crate.
- Weigh each piglet and record the birth weight.
- Ensure they are breathing properly.
- Tie, cut and disinfect the navel cords of the piglets. (1x10 = 10mks)

b)

- Brown tick.
- Red legged tick.
- Large bont legged tick.
- African bont legged tick. (1x2 = 2mks)

c)

- Eggs hatch on the ground into larvae;
- Larval climbs onto the first host; sucks blood;
- Get engorged; and moult into nymphs;
- Nymphs on the same host sucks blood; get engorged; and fall on the ground.
- On the ground nymphs moults into adults;
- Adults climbs the second host; the adult sucks blood;
- Get engorged; mates;
- The adult female drops to the ground to lay eggs. (1x8 = 8mks)

26. a)

- A cow is restrained in a crush
- A bull is brought to the teaser cow
- The bull mounts the cow and directs the penis to the vulva
- The farmer grabs the penis immediately and directs it into the artificial vagina
- The bull ejaculates into the artificial vagina and semen is collected (5x1 = 5mks)

b)

- Spraying livestock against external parasites
- Identifying animals
- Vaccination of animals
- Administration of prophylactic drugs to livestock
- Treating sick animals
- Dehorning
- Pregnancy test
- Artificial insemination
- Taking body temperatures
- Hoof trimming
- Milking

- Collection of semen (7x1 = 7mks)

c)

- Proper feeding and nutrition
  - It avoids deficiency diseases and makes animal strong and able to resist disease
  - A balanced diet prevents nutritional or metabolic disorders and ensures vigour and greater resistance to disease

- Proper breeding and selection
  - Healthy animals should be selected for breeding
  - Animals that are susceptible to diseases should be culled
  - Appropriate breeding policies and programmes should be employed to avoid transmission of congenital diseases

- Proper housing and hygiene
  - Houses should be constructed such that they meet the necessary requirements for particular animals
  - Livestock houses should be regularly cleaned and disinfected
- Isolation of sick animals
  - Sick animals should be separated and confined in their own structures for treatment to avoid the spread of diseases
- Imposition of quarantine
  - In the event of an outbreak of a notifiable disease, movement of animals and their products from and into the area with the outbreak should be restricted

- Taking prophylactic measures
  - Use of prophylactic drugs
  - Carrying out vaccination
  - Control of vectors
  - Treatment of sick animals
- Slaughtering of affected animals
  - Animals attacked by highly infectious and contagious should be killed and disposed off by burning or burying 6 feet under

- Use of antiseptics and disinfectants kill disease causing organisms thereby preventing disease attack

(8x1 = 8mks)