**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

* Fencing around the fish pond using strong wire mess.
* Providing a screen above the pond to guard against birds. ( ½ x 3 =1 ½mk)
1. Brown ear tick - E.C.F (½ mk)
2. Tse tse fly - Trypanosomiasis. (½ mk)
3. It’s a preventive treatment that gives the animal immunity against certain disease. (½ mk)
4. Application of chute at the belly of a ram to check for fertility of the animals. (½ mk)
5. Water / Mud snail. (½ mk)
* To fertilize the queen.
* Control temperature of the hive / cool the hive. (½ x 2 = 1mk)

7. Carifornia 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 = 2 mks)

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)