**FORM FOUR**

**AGRICULTURE PAPER 2**

**MARKING SCHEME**

1. Categories of produce store

* Traditional granaries
* Modern stores
* Silos
* Cyprus bins (4 x ½) = 2mks

2. Reasons for tooth clipping

* To prevent injury incase piglets fight
* To avoid injury to mothers teats during suckling
* To facilitate proper feeding of the piglets (Any 2 x ½) = 1mk

3. Uses of a rake

* Levelling the ground during land preparation
* Removing weed/trash from cultivated area 2 x ½ = 1 mk

4. Diseases of bees

* Acarive
* American foul brood 2 x ½ = 1 mk

5. Heifer – A young female cattle between weaning and first calving

Cow – A mature female cattle (Mark as a whole) 1mk

6. Species of livestock affected by tapeworms

* Pigs
* Goats
* Cattle
* Sheep
* Donkeys (Any 4 x ½) = 2mks

7. Viral diseases that affect poultry

* New castle
* Marek’s disease (fowl paralysis)
* Gumboro
* Avian flu
* Fowl pox Any 4 x ½ = 2mks

8. Disadvantages of natural incubation

* Few chicks hatched at one time
* Farmer can’t plan when to incubate
* Diseases and parasites can be easily transmitted to the chicks from hen
* Hens can only be used when broody
* Death of the bird will collapse the process *(Any 4 x ½ ) 2mks*

9. Causes of bad flavours in milk production

* Feedstuffs with strong smells prior to milking e.g. onions, pineapple fruit waste, Mexican marigold. Rej: feedstuffs alone
* Oxidation from exposure to sun or containers with traces of iron or copper 2 x ½ = 2 mks

10. Causes of death in cow during or after parturition

* Malpresentation of calf (Acc breech presentation)
* Excessive bleeding after birth
* Milk fever in high yielding animals Any 2 x ½ = 1 mk

11. Roughages – It is a feedstuff with high fibre and carbohydrate content and low in protein

Concentrate – It is a feedstuff with high amount of proteins or energy (carbodydrates) but low in crude fibre Mark as a whole = 1mk

12. Zoonotic diseases

* Anthrax
* Brucellosis (contagious abortion/bang’s diseases
* Tuberculosis
* Rabbies (Any 3 x ½ = 1 ½ mks

13. Uses of harrows

1. Levelling seedbed
2. Breaking soil clods
3. Stirring the soil
4. Destroying weeds
5. Burying trash (Any 4 x ½ = 2 mks

14. Signs of heat in pigs

* Restlessness
* Frequent urination
* Swelling and reddening of vulva
* Clear or slimy mucus discharge from vulva
* Respond positively to rider’s test
* Frequent mounting others (Any 4 x ½ mk) = 3mks

15. Plant species used to establish live fence

* Tick berry (lantana Gamara)
* Kei apple
* Crotons
* Gacti
* Sisal
* Euphobia
* Bougainvillea
* Mauritius thorn
* Cypress Any 3 x ½ = 2 mks

16. Benefits of scattering grains in deep litter house

* Provides supplementary feed to the bird
* Birds help to turn the litter as they scratch for the grain
* Keeps bird busy when scratching thus preventing vices (Any 2 x ½) 1mk

17. Types of lubrication system

* Splash feed
* Force feed
* Oil mist 3 x ½ = 1 ½ mk

18. Sheep breeds reared for meat

* Dorper
* Black head Persian
* Red Maasai sheep 3 x ½ = 1 ½ mks

19. Tools used during castration

* Burdizzo
* Elastrator and rubber ring Rej: elastrator alone
* Scapel 3 x ½ = 1 ½ mk

20. Disorders associated with calcium deficiency in animals

* Milk fever
* Soft shelled eggs
* Egg without shells (shell-less eggs)
* Osteomalacia/osteoporosis
* Rickets Any 4 x ½ (2mks)

**SECTION B (20 MARKS)**

21. (a) E 1mk

(b) F - High pressure / excess pressure 1mk

G - Low pressure / less pressure. 1mk

(c) F - Deflate to correct. 1mk

G - Inflate to correct. 1mk

22. (a) roof of a house. 1mk

(b) A - Rafter.

B - Tie.

C - Strut.

D - Wall plate.

E - Rafter bracket. 1 × 4 = 4mks

23. (a) W - Cold chisel.

X - Spirit level.

Z - Masons square. 1 × 3 = 3mks

(b) Z - Checks right angles during construction. 1mk

X - Checks whether a surface is vertical or horizontal. 1mk

24. (i) Rabbit.

(ii) A - Oesophagus.

B - Pancreas. 1 × 2 = 2mks

(iii) C - Produces intestinal juice / digestive juices / absorption of digested food.

D - Digestion of cellulose

- Absorbs carbohydrates. 1 × 2 = 2mks

**SECTION C: (40 MARKS)**

**25. a**

|  |  |
| --- | --- |
| **Petrol Engine** | **Diesel Engine** |
| 1. Uses petrol as fuel | 1. Uses diesel as fuel |
| 1. Spark plug ignition | 1. Uses compression ignition |
| 1. Has a carburetor | 1. Has no carburetor |
| 1. Has plugs for ignition | 1. Has no plugs |
| 1. Compression ratio is lower 8:1 | 1. Compression rate ratio is higher 16 :1 |
| 1. Power from air –fuel mixture 2. Lighter | 1. Power from diesel 2. Heavier |
| 1. Petrol engines produce les noise | 1. Produce more noise |
| 1. Produces less smoke | 1. Produce more smoke |
| 1. Needs more frequent maintenance | 1. Needs less frequent maintenance |

**25. b) Daily maintenance of a tractor**

* Engine oil
* Check the level with a dip stick and add if low
* Battery
* Check the level of electrolyte and distilled water to cover the plates
* Fuel
* Check and add if low
* Greasing
* Is done using the nipples on all greasing points
* Fan belt
* Tighten if loose
* Radiator
* Add water if level of water is low and remove vegetation
* Air cleanses
* Blow off any excessive dust
* Oil baths (air cleaner)
* Change oil if dirty
* Nuts, Bolts ,pins
* Tighten these if loose
* Sediment bowl
* Clean if clogged ***10 x 1 = 10 mks***

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1. Disease predisposing factors

Are conditions inside or outside the body of an animal which lead to the animal which contracting a disease or injury ***1x2 = 2mks***

b)

* Age of the animal ; species of the animal
* Sex of the animal ; Bred of the animal
* Colour of the animal
* Change of climate / environment
* Heredity
* Environment
* Overcrowding
* Physical conditions as fatigue , weakness and pregnancy
* Animal movement / Animal coming in contact wit animals

c)

* Age
* Stage of lactation
* Udder attachment / pendulous udder
* Incomplete milking
* Medicinal injuries
* Poor sanitation
* Poor milking technique

d)

* Proper feeding and nutrition : To prevent deficiency diseases and impart diseases resistance
* Proper breeding and selection : Healthy animals should be selected for breeding
* Proper housing : House should be well
* ventilated , leak proof, well lit , easy to clean ,spacious, free from draught , and well drained
* Isolation / separation of sick animals
* Animals showing disease symptoms should be isolated /separated from the rest of the hard to avoid further spread
* Imposition of quarantine : in the event of an outbreak of notifiable disease , movement of animals and their products should be restricted to prevent spread of diseases
* Prophylactic measures / Treatment : Prophylactic measures such as administering prophylactic drugs , help to control diseases
* Treatment : should be carried out to prevent disease attack and spread
* Vaccination : Regular vaccination gives am animal immunity against certain diseases
* Mass slaughter : Animals affected by highly infections and contagious diseases should be slaughtered to prevent further spread of the disease
* Use of antiseptics and disinfectants : Antiseptics can be use on open wounds e.g terramycin sprays , disinfectants contain germicidal chemicals help to control of are disease as scours in calves,fowl typhoid, coccidiusis etc.
* Control of vectors: Disease carrying agents like tsetse flies and ticks are controlled by use of appropriate insecticides.
* Use of healthy breeding stock / Artificial insemination
* breeding stock : Artificial insemination help to prevent the spread of certain diseases e.g. Brucellosis
* De-worming : Internal parasites be controlled by drenching of farm animals to help control parasites as tapeworms ,round worms ,liver flukes etc
* Rearing diseases resistant breeds : some livestock breeds are more tolerant to diseases than others eg zebra cattle are tolerant to East Coast fever
* Trimming of hooves to minimize occurrence of foot not disease ;Ensure no sharp objects like cut wire I pasture like bloat.

Any first 4 x2 8mks

***27.***

- Construct a broader of suitable dimensions

- Avoid corners in the house/broader

- Provide litter and cover it with old newspapers

- Provide enough heat sources to warm the chicks

- Protect heat sources to avoid accidents

- Provide waterers and feeders well distributed

- Ensure waterers and feeders are clean

- Cull sick chicks

- Vaccinate the chicks

- Debeak habitual cannibals

- Feed on layers marsh from week 16

- Supply grit to supplement digestion

- Provide parches for exercise

- Supply vegetables adequately

- Maintain the litter dry and free from dust

- Introduce growers marsh from week 6 – 8

- Check for pests / parasites and apply appropriate control measures

- Keep up to date records

- Check birds for disease symptoms and treat them immediately

- Provide enough calcium giving oyster shells

- Maintain and repair the house as need arises.