**MARKING SCHEME BUNAMFAM NOVEMBER 2021**

**AGRICULTURE**

**FORM FOUR PAPER 2**

1. Tools used when laying concrete blocks during construction of a wall.

- Plumb bob/plumb line

- Mason’s trowel

- Spirit level/pipe level

- Wood float/steel float

- Masons square

- String/masons line/line (4 x 1/2 = 2 marks)

2. Importance of guard rails in a farrowing pen.

- Prevents sow from crushing piglets .

- Prevents sow from eating creep feeds. (1 x 1 = 1 mark)

3. Reasons for having foot bath in a cattle dip.

- Clean the feet of animals

- Control foot rot Rej. Control of diseases (2 x 1/2 = 1 mark)

4. Crutching and ringing

- Crutching is the cutting of wool around the external reproductive organs of a female sheep to facilitate mating

- Ringing is the cutting of wool around the sheath of the penis in rams to facilitate mating.

(Mark as a whole 1 mark)

5. Signs of kindling in a doe.

• Nest building

• Plucking of fur From the body

• Lose of appetite.

• Restlessness. (4 x ½ = 2 marks)

6. Developmental stages of liver flukes in a fresh water snail.

• Sporocyst.

•Cercaria

•Redia. (2 x ½ = 1mark)

7 .Uses of a spring -tine harrow.

-Levelling the seedbed.

-Breaking soil clods.

-Burying trash

-Aerating the soil.

(4 x ½ =2 marks)

8.Signs of mite attack in poultry,

• Irritation/scratching of the body.

• Anaemia,

• Presence of mites below the plumage in patches.

• Falling off of feathers.

' Dermatitis due to burrowing effects.

• Formation of crusts. (4 x ½ = 2 marks)

9.Advantages of natural feeding in calf rearing.

•Calf takes milk at body temperature,

•Milk is free from contamination

• it prevents scouring in calves.

•Milk is provided ad libitum. (3 x ½ = 1 ½ marks)

10. Ways in which infectious diseases can spread

- through vectors

- through ingestion of contaminated food and water/through food and water

- Through contact

- Through inhalation of contaminated air/through air. (3 x 1/2 = 11/2 marks)

11. Reasons for castration

- Prevent uncontrolled mating.

- Improve the quality of meat

- Promote faster growth/facilitate weigh gain

- Make then docile

- Control breeding diseases

- Control inbreeding (4 x 1/2 = 2 marks)

12. Characteristics of roughages

- Bulky

- High fibre content

- Low nutrient content

- Low digestibility

(4 x 1/2 = 2 marks)

13.. Functions of the crop in poultry digestive system.

- Softening/moistening food

- Temporary food storage. (2 x 1/2 = 1 mark)

14. Roles of worker bees .

- Kills the drones after mating the queen

- Scouting for a new home

- collect nectar/water/gum/propolis/pollen

- Make honey combs

- Protect the colony

- Clean the hive

- Make honey and bees wax

- Seal the cracks and crevices. (4 x 1/2 = 2 marks)

15.. Reasons for controlling livestock diseases.

- Reduces spread of livestock diseases/production of healthy young ones

- Promote fast growth and early maturity - rej to maintain good health in livestock

- Make them have long productive life.

- Improve quality and safety of products

- Improve quantity of products

- Reduce cost of production. (4 x 1/2 = 2 marks)

16 Caponisation in poultry.

-Surgical /open method.

-Implanting pellets of the female sex hormone beneath the skin of the bird.

-Injecting with stilbestol hormone when whey are one day old.

(3 x ½ = 1 ½ marks)

17. Advantages of using animal power.

• Animals are cheap to acquire /maintain.

• Require less skilled labour.

• Can be used on,small holdings.

• Are appropriate in very steep areas. (4 x ½= 2 marks)

18. (a) Blue ticks - Anaplasmosis

(b) Brown ear ticks - E.C.F,

(c) Tsetse flies - Trypanosomiasis (nagana) (3x ½ =1 ½ marks)

**SECTION B**

19.. ( a) Dry cow therapy. (1mk)

(b) At the end of drying off. (1/2 mark)

(c) • teat dipping

• complete milking

• proper milking technique

• applying milking jelly after (2x1=2 marks)

d) Hypodemic needle and syringe

20.

20%

soya bean

04 parts

2 4 parts in total

Soya bean

40% DCP

Rice

20 parts

Rice

16% DCP

Rice - 20/24 x 100 = 83.3 kg

Soya bean - 4/24 x 100 = 16.7 kg (1 x 5 = 4marks)

21. a) A-.Furrow wheel /Rear depth wheel / Control wheel /Thrust wheel

B .Beam

C -Disc

D-Disc scrapper

b) A -Controlling ploughing depth

-Stabilising the plough/controlling side thrust

D -Asisting in furrow slice inversion.

-Removing soil from the disc during ploughing

c) Disc plough

22. a) Causes of chicks’ behaviour in the illustrations A, B and C.

A-Presence of draught makes the chicks to crowd on one side of the brooder

B-Cold/inadequate heat makes the chicks to crowd around the heat source.

C-High/Excess heat makes the chicks to move away from the heat source.

(3 x 1 = 3 marks)

b) Reasons for making brooder wall round in shape.

- To discourage overcrowding of chicks at the corners to avoid suffocation.

(1 x 1 = 1 mark)

c ) Requirements of a good brooder.

-Should have enough feed and water troughs

-It should be well aerated.

-Should be spacious enough

-It should be easy clean

-It should be properly drained. (4 x ½= 2 marks)

**SECTION C.**

23. . Factors considered when culling livestock.

• Cull livestock of:

• Poor health;/chronic sickness

• Old age;

• Physical deformities;

• Hereditary defects;

• Infertility;

• Poor mothering ability

• Poor quality products;

• Low production;

•Bad temperament. (1 X 5 = 5 marks)

(b) Description of poultry management under:

(i) Cause of stress.

• Any sudden change in routine

• parasite infestations

• Lack of food and water

• Strangers and predators in the birds' house.

• Sudden noise such as passing tractors and thunder.

• Poor handling of birds during routine practices.

• Overcrowding which leads, to competition for space.

•Sudden climatic changes

• Poor lighting in poultry house.

• Inadequate laying nests. (1x8 marks )

(ii) Control measures for cannibalism

• Control external parasites.

• Keep birds busy by hanging green leaves or vegetables in the house.

• Feed the birds on a balanced diet.

• Provide adequate floor space.

• Provide adequate laying nests.

• Provide dim lights in the brooder.

• Keep birds as per the age group.

• Debeak hens which peck others.

• Cull perpetual cannibals. (7 x 1 = 7 marks)

24. a) Use of the various parts of a zero grazing unit in dairy farming.

- Milk recording room - weighing and milking records

- Milking stall - rearing calf to weaning

- Calf pen - rearing calf up to weaning

- Sleeping cubicles - provide shelter and warmth

- Loofing area - dunging, feeding, exercise and sunning

- Feed and water troughs - feeding and watering the animals

- Feed preparation room - preparing feed rations and cropping fodder rej. chaff cutter region

- Store - storing/keeping dairy equipment/feeds

- Manure storage areas storing measure.

Parts is tied to the function

( 6 x 1 = 6 marks)

b) Trypanosomiasis Disease under the following sub-headings.

(i)Cause.

-Protozoa .-*Trypanosoma spp*

-*Trypanosoma brucei.*

*-Trypanosoma evansi.*

(ii)Animals affected.

-Cattle.

-Sheep.

-Goats

-Horse.

-Pigs.

(iii)Symptoms of attack.

-Fever.

-Loss of appetite/anorexia.

-General boby weakness.

-Swolen lymph nodes

-Lachrimation which leads to blindness.

-Diarrhoea.

-Rough coat and sometimes without hair and may be cracked.

-Swelling in parts of the belly.

-Drop in milk production.

-Loss of hair at tail end.

- Anaemia.

-Abortion may occour in pregnant females.

(iv) Control measures.

-Treating animals with trypanocidal drugs.

-Effective vector (tsetsefly ) control .

-Confinement of wild animals in game parks.

25. a) Characteristics of a poor layer.

- Combs and wattles - small/shrivelled/shrunken. dry scaly and place.

- eyes - dull and pale yellow.

- Beak - yellowish in colour.

- Abdomen/breast - hard and full

- Vent - round, dry and less active

- Space between keen and pelvic bone - small and fits only one or two fingers

- Plummage - preened & glossy (smooth) beautiful

- Moulting - early moulting

- Shanks/feet - Yellowish in colour

- Broodiness - Is common/early moulting

- Temperament - easy and dull

- poor layer is inactive.

Mark as a whole (10 x 1 = 10 marks)

b) Characteristics of clean milk

- Free from disease causing micro-organisms/pathogens

- Free from hair, dirt or dust./contamination.

- Free from bad odours and tastes/has good flavours.

- Chemical composition within expected standards. (3 x 1 = 3 marks)

-White in colour.

ii) Factors influencing milk composition

- Age of animal

Butter fat in milk becomes less as an animal grows old thus young animals produce milk with higher BF than older animals.

-Breed differences rej. species of the animal

Different breeds of cattle produce milk with differing percentage composition e.g Jersey produce higher BF than Friesian.

- Type of food eaten by an animal

Roughage feeds produce milk with higher fats, lactose and protein compared to grains.

- Diseases

Diseases such as mastitis reduce the lactose composition in milk because bacteria attack milk sugars.

- Physiological condition of the animal.

Sick/extremely emaciated animals register low percentage of BF/during late pregnancy cows produce milk with low BF content.

- Stage of lactation

The BF content in milk is highest at the middle phase of the lactation period and lowers towards end of lactation.

- Completeness of milking

Milk drawn last from udder during contains high BF content/last drop milk has BF content produce in the milk.

- Season of the year - accept environmental condition

BF content increases during cold seasons.

-Time of milking

Milk produced in the morning has a lower BF content than milk produced in the evening

(1/2 factor ,1/2 mk explanation) (7 x 1 = 7 marks)