**MARKING SCHEME**

**ARISE AND SHINE TRIAL 1 EXAM**

**AGRICULTURE P2 2022**

**SECTION A [30 MARKS]**

***Answer All The Questions in The Spaces Provided.***

1. State two factors that may caused ewes not to conceive after service. [1 mark]
2. Poor nutrition
3. Infertility
4. Poor timing of service

(2x1/2)=1mk

1. State three signs of anthrax infection disease observed in the carcass of cattle [11/2 mark]
2. No rigormatise after death
3. Stomach swells/bloats
4. Darkened red blood oozes through the natural opening/orifices
5. Blood does not clot

(3x1/2=1 ½)

1. State three adjustment that should be carried out on a tractor-mounted moldboard plough in preparation for ploughing. [1 ½ mark]
2. Adjust the plough depth
3. Front furrow depth
4. Lowering & raising plough patch
5. Front furrow width

(3x1/2=1 ½)

1. Outline two main characteristics of the Bactrian camel breed. (1 mark)
2. Two humps
3. Hairy body
4. Absence of trap nose

(2x1/2=1)

1. State four construction features necessary in a fish pond. [2 marks]
2. An outlet to drain of excess water
3. An inlet to fresh water supply
4. A spill way channel to take away excess water/overflow water.
5. A screen to prevent escaping of fish/entry of unwanted objects/fish

(4x1/2=2)

1. State four conditions that would encourage hens to eat eggs in poultry production.[2 marks]
2. Presence of broken or soft shelled eggs.
3. Bright light in the nests allowing birds to see the eggs.
4. Idleness in the poultry house.
5. Inadequate nests forcing some birds to lay eggs in the open.
6. Lack of minerals such as calcium in the diet.
7. Irregular egg collection.

(3x1/2=1 ½)

1. What is the reason for turning eggs regularly during incubation? (1 mark)
2. To prevent the germinal disc from sticking on the egg shell which may lead to death of the embryo.
3. To make sure warmth is distributed evenly around the egg for uniform embryo development

(2x1/2=1 ½)

1. State four practices that should be carried out on wooden fencing posts to make them last long. [2 marks]
2. Reinforcing with concrete
3. Cutting the top of posts at a slope
4. Covering the top of posts with metal plate.
5. Charring/sling burning of posts
6. Applying wood preservative copper sulphate,cresole,pentach
7. Painting
8. Apply add engine oil
9. Seasoning
10. Name four structures which would assist in the control of livestock parasites on a farm.

[2 marks]

1. Spray race
2. Footbath
3. Housing/shed
4. Fences
5. Crush
6. Plunge Dip

(4x1/2=2mks)

1. Give two benefits of providing enough nutrients to livestock for proper health. [1 mark]
2. To avoid deficiency disease
3. Make the animal robust/strong enough to be able to resist diseases attack.

(2x1/2 =1 mark)

1. Give two harmful effects of ticks in sheep. [2 marks]
2. Cause irritation
3. Damage the wool (due to scratching/lower quality of wool
4. Cause retarded growth
5. Cause anemia
6. Bites and injuring the skin/create wounds

(2x1/2=1 mark)

1. State four roles of worker bees in a colony. [2 marks]
2. Rear and nurse the brood
3. Collect nectar to make honey
4. Make honey combs
5. Ventilate the hive
6. Protect the colony
7. Clean the hive

(4x1/2 = 2marks)

1. State the role of the crop in digestive system of a hen. [2 marks]
2. Softening/moisturizing food
3. Temporary food storage

(2x1=2marks)

1. State four reasons or castration in pig production. [2 marks]
2. Prevent uncontrolled mating/inbreeding
3. Improve the quality of meat
4. Promote faster growth
5. Make them docile
6. Control breeding diseases

(4x1/2=2 marks)

15. State two benefits of guard rails to piglets a farrowing pen? [1 mark]

1. Prevents sow from crushing piglets
2. Prevents sow from eating creep feeds

(2x1/2 = 1mk)

1. State the role of a foot bath in a cattle Dip. (1 mark)
2. Clean the feet of animals
3. Control foot rot

(2 x ½ =1mark)

1. Distinguish between the following practices as used in livestock production.

(a). Crutching is ringing in sheep production. (2 marks)

1. Crutching in cutting of wool around the external reproductive organs of a female sheep to facilitate mating.
2. Ringing is the cutting of wool around the sheath of the penis in rams to facilitate mating.

(Marks a whole) (2 marks)

(b). Cropping and harvesting in fish farming. (2 marks)

1. cropping is the selective removal of fish of marketable size from the pond and harvesting is the removal of all the fish from the pond

(Mark as a whole (2 mark)

1. State two characteristics of a poor layer in poultry production. (1 mark)
2. Poor layer
3. Small/shrunken/dry scaly and pal comes
4. Dull and pale yellow
5. Hard and dull
6. Round, dry and less active

**SECTION B [20 MARKS]**

***Answer all questions in this section in the spaces provided.***

1. A pig farmer in sugoi is required to prepare 100kg of sow and weaner meal containing 20% digestible crude protein (D.C.P). Calculate the quantity of soya bean (50%) D.C.P) and rice (16% D.C.P) the farmer requires or he meal. Use the Pearson’s square method.

 4

 soya beans 50 4 parts of soya bean $√$(1)

 20

 Rice 16 30 parts of rice

 Rice 16 30 parts of rice $√$ (1)

 34

= Soya beans = $\frac{4}{34}$ x 100kg $√$(1)= 11.7kg

= Rice = $\frac{30}{34}$ x 100 kg$ √$(1) = 88.2kg

1. x1)=4 mk
2. The diagram below represent farm tools and equipment. Study them and answer the question that follow.

(a). Identify the tool/equipment labelled B and C. (1 mark)

B – milk churn

C –claw hammer

(2x1=2mk)

(b). State the role of C and D (2 marks)

C –For driving in and removing nails from wood

D –For levelling, spreading and shaping mortar or concrete

* Lifting seedlings from nursery bed

(2x1=2mks)

(c). Give two maintenance practices for the equipment labelled A. (1 mark)

1. Clean after use/regularly
2. Keep hanged in a shade or on tool rack upside down

(2x1/2=1mk)

1. The diagram below shows the reproductive system of a cow study it carefully and answer the questions that follow.

(a). Name the parts labelled J and G. (2 marks)

* J- uterus
* G- ovary

2x1=2mks)

 (b). Give two functions of the part labelled F. (2 marks)

1. Protect the uterus from bacteria and other foreign objects
2. Opening during labour to allow a calf to pass through the birth canal
3. Produces cervical mucus during the most fertile phase which helps sperm travel from vagina to the uterus

(2x1=2mks)

 (c). Give the role of the part labelled H. (1 mark)

1. H-allow for passage of ovum from ovaries to uterus
2. It slows down movement of ovum so as to allow time for fertilization

(1x1=1mk)

1. The diagrams K, L, M and N below show four possible ways of drawing milk from the teat of a cow during milking.



(a). Which diagram shows the proper way of drawing milk. (1 mark)

* N (1x1=1)

 (b). How long should I take to milk a cow from the start to the end of milking. (1 mark)

* 6-8 mins (1x1=1mk)

 (c). How would a milkman ensure that no milk remains in the udder at the end of milking?

(1 mark)

* Stripping the teats to remove milk (1x1=1mk)

 (d). State two disadvantages of using wrong milking method. (2 marks)

* It is injurious and leads to formation of scar tissue/physical injury on the teat cistern
* The pulling effect leads to tearing of teat tissue making them more prone to bacterial invasion/mastitis
* Chances of milk contamination are high because of application of milk salve/teat dipping becomes necessary (2x1=2mks)
1. Below is a table showing names given various livestock animals at various stages of growth. Fill in the Blank spaces. (2 marks)

|  |  |
| --- | --- |
| Stage | Name |
|  | Pigs | Cattle | Poultry |
| Mature male for breeding | * Boar
 | * bull
 | cock |
| Young female before first parturition | Gilt | * Heifer
 | Pullet |
| Young one from birth/hatching to meaning | * piglet
 | calf | chick |

 (4x1/2 = 2mks)

**SECTION C. (40 MARKS)**

***Answer any two questions in this section in space provided at the back..***

24. (a). Describe the management of growers up to the point of lay. (10 marks)

The management of grower up to the point of lay

* Feed the grower on adequate growers mash per bird per day.
* Supplement the grower mash with grains and greens
* Introduce soluble grit/oyster shells at 20th week
* Provide adequate clean water and libtitum.
* Adjust floor space;allowance,as the bird age appropriately
* Give a booster vaccine against new castle disease at 20 weeks of age, at the 18th week, vaccinate against fool pox.
* Drench the birds regularly against internal parasites.
* Dust the bird with the appropriate pesticides against external pests.
* Control predator such as rat/cats.
* Feeders and waterier should be cleaned and disinfected daily.
* Maintain foot bath at the entrance of the poultry house.
* Keep the litter as dry as possible/turning it regularly.
* Introduce the layer mash from the 18th week and increase gradually.
* Provided roosts/perches for the birds to perch on from the 9th week.
* Birds start laying at 18-21 weeks of age depending on the breed.

Any 12x1=12 marks

 (b). Describe ten management practices carried out on cattle during parturition. (10 marks)

 Management during parturition in cattle:

* Watch for signs of parturition
* Separate the animal and put it in a parturition pen;
* Watch for breech presentation, and seek the assistance of a veterinarian;
* Remove mucus around the muzzle of young one to allow for efficient breathing;
* Administer artificial respiration to the young one if breathing is delayed;
* Allow the young one to suckle colostrum;
* allow the mother to lick the young one/wipe the calf using a clean piece of cloth if the mother does not lick it;
* tie and cut the navel cord;
* disinfect the navel cord wound using iodine;
* check and ensure the placenta come out, if not consult a veterinarian;
* record the weight of the calf; to help monitor growth;
* Take orphaned, /disowned/weak calf to a warm place to avoid chilling.
* Separate the calf from the dam after it has been licked and take it to a warm calf pen;

(1x10=10mks)

25. (a). Name the strokes in a four stroke engine and describe how each operates. (12 marks)

* **Induction stroke**: The piston moves down the cylinder causing the inlet valve to open and draw in fresh supply of petrol vapour and air into the cylinder.
* **Compression stroke**: The inlet valve closes and the piston moves up the cylinder. This compresses the fresh fuel mixture into the combustion chamber.
* **The power stroke**: Fully compresses the fresh and fuel mixture and a result a spark is produced at the spark plug. This causes the fuel mixture to ignite and expand resulting in pressure that forces the piston down the cylinder.
* **The exhaust stroke:** The piston moves up the cylinder to eliminate the burnt fuel mixture through an open exhaust valve. (Total 12 marks

**@Stating = 1mk , explanation = 2mks**

(b). Describe the functions of the gear box in a tractor. (8 marks)

* Helps the driver to select any forward or reverse gear.
* Adjusts speed o the drive from the engine crank shaft to the drive shaft.
* Helps to alter the speed ratio.
* Enables the power from the engine to be more easily applied to the work done by the tractor.
* Enables the driver to stop the tractor movement without stopping the engine or without foot pressing on the clutch all the time. (4x2=8mks)

26. (a). Name and describe the features of an ideal calf pen. (8 marks)

* Concrete/raised slatted floor: The pen should always be clean. The pen should easy to clean.
* Dry litter: Should have dry litter on the floor. The roof should be leak proof
* Adequate space: The pen should be large enough to allow for exercise/feeding/watering.
* Proper lighting: Should have good supply of natural light/sunlight
* Proper drainage: Should have good drainage in and round the pen
* Draught free: The structure should stop strong winds from blowing into the calf pen
* Proper ventilation: structure should allow for fresh air circulation
* Security: Should be strong enough to keep away intruders/wild animals

 8 pointsx1mk=8mks

(b). Discuss pneumonia in calves under the following sub-headings:

(i). predisposing factors

(4 marks)

* Overcrowding of calves in the pen.
* Dampness/chilliness in the pen.

(ii). symptoms (5 marks)

* Rough hair coats/ruffled hair
* Loss of appetite
* Abnormal lung sounds, for example; whizzing.
* Emaciation
* Frequent coughing
* Nasal discharge
* Fluctuating body temperature
* Rapid/labored breathing
* Dull and reluctant to move (5x1=5mks)

(iii). Control measures. (3 marks)

* Treating the sick calves with antibiotics
* Providing warmth in pens.
* Maintaining good sanitation in pens.
* Isolating sick calves to avoid spread of the disease. (3x1=3mks)