**AGRICULTURE FORM 2**
**TERM 3, 2023**

**MARKING SCHEME**

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**1**. Differentiate between (3mks)

a) Straight and compound fertilizer

**Straight fertilizer contain only one macronutrient, compound contain 2 or more macronutrients**

b) Over sowing and under sowing

**Over sowing is establishment of a legume in an existing grass pasture**

**Under sowing is establishment of a grass pasture a under a cover crop**

c) Seed dressing and seed inoculation

**Seed dressing is the coating of seeds with a fungicide or an insecticide to prevent infestation of soil borne pests and diseases**

2. Give three methods of breaking seed dormancy (3mks)

**Soaking in water**

**Heat treating**

**Chemical treatment**

**Mechanical treatment**

3. State four signs of infestation by external parasites in livestock (4mks)

- **Anaemia**
- **Irritation/ scratching**
- **Loss of hair**
- **Wounds on skin**
- **Presence of parasites on the body**

4. Name the intermediate host for each of the following internal parasites. (2mks)

i) Tape worm (Taenia solium)

**Pig**

(ii) Liver fluke (Fasciola hepatica)

**Fresh water snail**

5. Name two groups into which vitamins are classified (2mks)

**Water soluble**

**Fat soluble**

6. Give two characteristics of a livestock roughage feedstuff. (2mks)

- **Bulky**
- **Low digestibility**
- **Low in energy/ protein content**
- **Highly fibrous**
- **Plant origin**

7. Outline three functions of proteins in the body of an animal. (3mks)

- **Raw materials for synthesis of livestock products e.g. milk, eggs**
- **Growth of cells**
- **Production of energy**
- **Formation of enzymes. Hormones and antibodies**
- **Repair of worn out tissues**

8. Give four functions of calcium in dairy cow. (4mks)

- **A component of milk**
- **Formation of the skeleton / teeth**
- **Blood clotting**
- **Nerve functioning/ control milk fever**

9. State three factors that are considered when formulating a livestock ration (3mks)

- **Nutrient requirement of the animal**
- **Age of the animal**
- **Type of animal whether ruminant or non- ruminant**
- **Availability of feedstuffs**
- **Cost of the food stuffs**

10. (a) Explain the term "production ration" as used in livestock productions. (1mks)

- **Production ration is the feed given to an animal over and above maintenance level in order to produces a given product**

b) State three factors which determine the amount of feed an animal can consume. (3mks)

- **Body weight/ size**
- **Age of the animal**
- **Work done**
- **Level of induction**
- **Physiological condition e.g. pregnancy**
- **Weather conditions/ ambient temperature**

11. (a) State three advantages of keeping a herd of dairy cattle health (3mks)

- **They have a longer productive life**
- **Produce high quality produce**
- **They are less expensive to keep**
- **They are high yielding**
- **Do not spread diseases others/ man**
- **They breed regularly**

12. The diagram below shows crop rotation programme practiced on a virgin land for three seasons

| | |
|---|---|
| **PLOT A**<br><br>MAIZE | **PLOT B**<br><br>BEANS |
| **PLOT D**<br><br>POTATOES | **PLOT C**<br><br>CABBAGES |

Arrows show how crops were rotated after the first season (2mks)

(a) Give one reason why

i) Maize was planted first in plot A

**Are heavy feeders**

ii) Irish potato was rotated with cabbage after the first season

**Different families hence control weeds, pests and diseases**

b) Name two crops that can be planted in the place of Irish potatoes in the rotation programme(1mk)

**Any crop that is not from grass or brassica families**

13. A farmer wants to prepare a 100kg ration containing 20%DCP from wheat (10%DCP) and sunflower seed cake (35%DCP). Using Pearson's square method, calculate the quantity of wheat and sunflower seed cake the farmer requires (3mks)

**Mark all the points in Pearson's square method award half mark for each entry**

**Wheat=60kgs**

**Sunflower=40kgs**

14. Giving an example, explain the five predisposing factors of livestock diseases (5mks)

**Sex of the animal**

**Breed**

**Age**

**Species**

**Colour**

**N/B- award 1 mark each point if correct example is given**

15. Describe the life cycle of a three- host tick. (6mks)

- **Larvae climbs on host**
- **Larva feed on 1st host**
- **Larva drop on the ground and moults into a nymph**
- **Nymph climbs – onto 2nd host**
- **Nymph feeds on 2nd host**
- **Nymph drops on the ground and moult into an adult**
- **Adult climb on 3rd host**
- **Adults feeds and mate on 3rd host**
- **Mated, engorged female drops and lay eggs on the ground**
- **Egg hatches into larvae**