

**AGRICULTURE**  
**FORM 3:**  
**TERM 1 2025**  
**OPENER EXAMINATION MARKING SCHEME**

1. State five functions of water in an animals diet.(5marks)

- It is a component of body cells and many body fluids such as blood.
- Transports nutrients from one part of the body to another
- It makes cells turgid, maintaining the shape of the body cells.
- It is used in the biochemical reactions such as digestion in the body.
- It helps to regulate body temperature through sweating and evaporation.
- It helps in the excretion of waste products from the body.
- It forms part of animal products for example, milk contains 83% water and an egg contains 55% water.

2. Give three sources of water in the animal's body.(3marks)

From drinking (free water)

- From food (bound water)

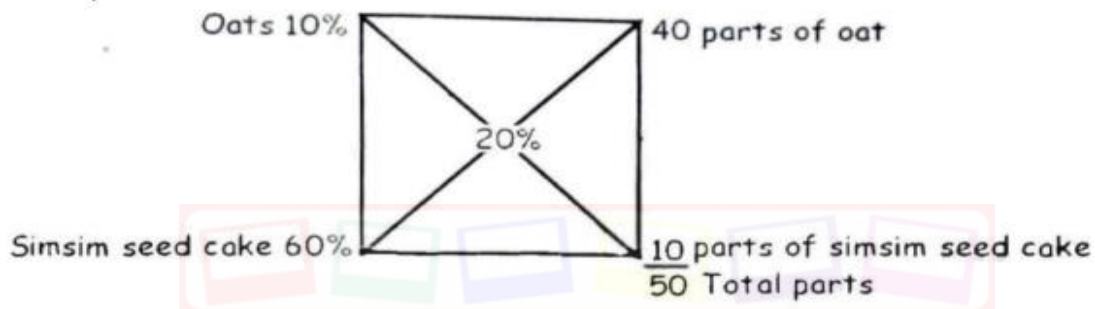
- From metabolism (metabolic water)

3. Outline five factors that influence the amount of water taken by a farm animal. (5marks)

- Ambient temperature .
- Type of food eaten by an animal.
- Level of production or amount of \work.
- Weight of the animal or body size.
- Species of animal

4. a) Using the Pearson's square method, compute a 100kg ration with 20% DCP oats which contains 10% DCP and simsim seed cake containing 60%DCP. (5mks)

30. a)



Amount of oat needed will be  $\frac{40 \times 100}{50} = 80\text{kg}$

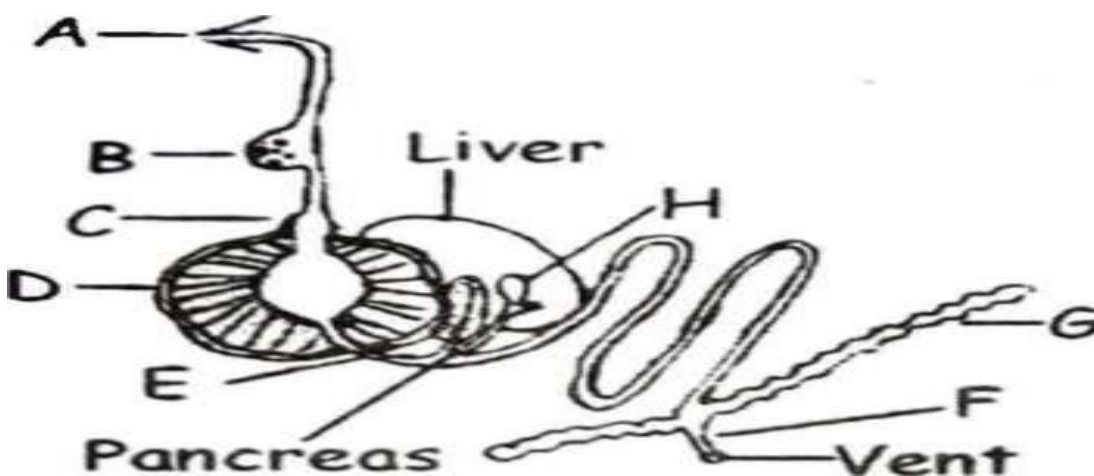
Amount of simsim seed cake needed will be  $\frac{10 \times 100}{50} = 20\text{kg}$

5.a) Give five differences between ruminant and a nonruminant animal. (5marks)

Ruminant	Non-ruminant
1. Chew cud	1. Do not chew cud
2. Have four stomach chambers thus polygastric	2. Have one stomach chamber thus monogastric
3. Regurgitate food	3. Cannot regurgitate food once swallowed.
4. Can digest cellulose. Have micro-organisms in the rumen that digest cellulose	4. Have no micro-organisms in the stomach hence cannot digest cellulose except those animals with micro-organism in the caecum
5. Have no ptyalin in saliva hence no enzymatic digestion in the mouth	5. Have ptyalin in the saliva hence enzymatic digestion starts in the mouth.
6. Most digestion and absorption takes place in the rumen	6. Most digestion and absorption takes place in the small intestines.
7. Have alkaline saliva due to presence of ammonia	7. The saliva is neutral in pH



6. The diagram below shows the digestive system of a livestock.



a) Identify type of livestock that posses the digestive system shown above. (1mark)

✓ Poultry

b) Name the parts labeled B,C,D and G. (4 marks)

B- crop

C-proventriculus

D-Gizzard

G-caecum

c) State the main functions of the parts labeled B, C. Dand G. (4 marks)

B- fermentation of food and moisturing

C- True stomach

D-grinding food

G-digesting cellulose



7. a)State five harmful effects of ticks. (5marks)

- They transmit diseases.

- cause anaemia

- Cause irritation

- Damage skin
- Cause wounds that acts as routes for secondary infections
- Some produce toxins that may cause adverse effects on the host.

c) List five control measures of ticks. (5marks)

- Hand-picking and killing
- Burning heavily infested pasture
- Ploughing heavily infested pasture
- Rotational grazing
- Double fencing of pasture land
- Use of appropriate chemicals

- Use of predator birds
- Zero grazing or restraining the movement of animals.
- Hand dressing using pygrease.

8. Name the four main stages of the life cycle of ticks.(2marks)

- The egg
- The larva with six legs
- The nymph with eight legs
- The adult with eight legs



9. a) What is meant by one host tick. (1mark)

It is a tick that completes all its stages of development on the same host.

10. Describe the life cycle of a three host tick. (5marks)

- 1- Eggs hatch, larvae emerge
2. Larvae climb on to the first host and feed on blood
3. Engorged larvae fall to the ground and moult, nymphs emerge
4. Nymph climbs onto the second host and feed on blood,
5. Engorged nymphs fall to the ground and moult, adults emerge.
6. Adults climb onto third host feed on blood and mate
7. Engorged female falls to the ground and lays eggs.

