

CHRISTIAN SOCIAL SERVICES COMMISSION (CSSC)

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NORTHERNZONEJOINTEXAMINATIONSSYNDICATE(NZ-JES)



FORM FOUR PRE–NATIONALEXAMINATION AUGUST 2026

AGRICLTURAL SCIENCE 2 MARKING SCHEME

034/2

1(a)(i)A..... Crop

B Gizzard (**3marks@ 1**)

C..... Cloaca

(ii) Functions of sample A (Crop) (**4 marks@ 2 marks**)

- ❖ Moistening/softening of food substance
- ❖ Temporary storage of food

Functions of sample C (cloaca)

- ❖ Passing of egg out
- ❖ Passing of waste material
- ❖ For reproduction

(iii) Grit materials were observed(**3.5 marks**)

(iv) Adaptive features of B (gizzard) (**2 points@ 1marks**)

- ❖ Presence tough layer of muscles that contract frequently to grind food
- ❖ Presence of grit materials which aid in grinding food.

1(b)(i) I observed waxy scum which form on top of the water(**2 marks**)

(ii) - Wastage of material. Excess heat can cause wax to evaporate

- Loss of quality. High temperature can change texture, colour and smell of wax.
- Wax is flammable hence can catch fire easily.
- Production of harmful fumes (**3marks@ 1**)

(iii) **Uses of wax (5 points@ 1marks)**

- Used in candle making
- Used in making of polish
- Used in making cosmetics
- Used in making medicine. Example medicinal creams
- Used in making lubricants

- Used in preservation. Example cheese
- (iv) By product of Wax **(5 points@ 0.5 marks)**

- Candles
- Body creams and lotions
- Lip balm
- Soap
- Shoe polish
- Furniture polish

2. (i) The weight of sample S before heating was 15g but after heating the weight decreases below 15g **(4marks@ 2)**

(ii) Changes of weight occurs due to loss of water from the sample S **(3marks)**

(iii) After strong heating the colour of the sample changes to black **(2mark)**

Reason due to burning of the organic matter. **(2marks)**

(iv) (a) Water **(01 marks)**

(b) Organic matter. **(01 marks)**

The first substance to lost was water **(01 marks)**

Reason: Water lost first because it requires less heat energy to escape from the soil compared to organic matter which needs more energy than water **(3marks)**

(v) Advantages of organic matters **(4 points@ 1 marks)**

- Improve soil structures
- It maintains soil fertility
- It improves water retention
- It encourages biological activities

Advantages of soil water **(4 points@ 1 marks)**

- It dissolves soil nutrients
- Temperature regulation
- It enhances binding of soil particles
- It is essential for survival of micro-organism eg fungi and bacteria