



Rewarding Learning

General Certificate of Secondary Education
2022

Centre Number

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Candidate Number

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Agriculture and Land Use

Unit 2
Animals on the Land



GAU21

[GAU21]

MONDAY 20 JUNE, AFTERNOON

TIME

1 hour 15 minutes.

INSTRUCTIONS TO CANDIDATES

Write your Centre Number and Candidate Number in the spaces provided at the top of this page.

Write your answers in the spaces provided in this question paper.

Answer **all nine** questions.

INFORMATION FOR CANDIDATES

The total mark for this paper is 75.

Figures in brackets printed down the right-hand side of pages indicate the marks awarded to each question or part question.

Quality of written communication will be assessed in Questions **7(b)** and **9(b)**.

For Examiner's use only

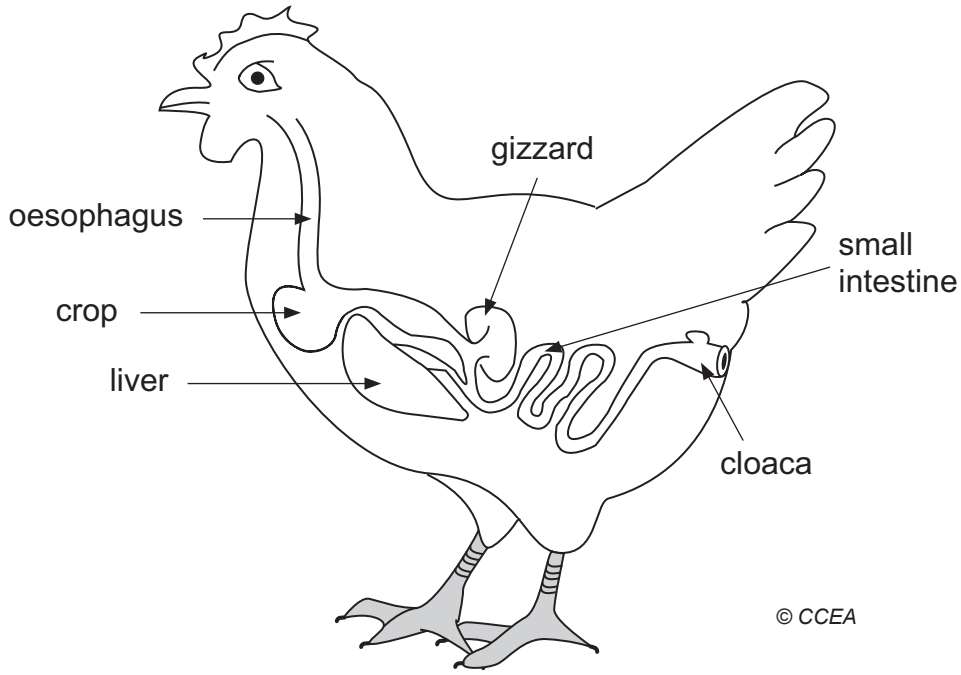
Question Number	Marks
1	
2	
3	
4	
5	
6	
7	
8	
9	

Total Marks	
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(Questions continue overleaf)

3 The diagram below shows part of the poultry digestive tract.



(a) Describe the function of the following parts of the poultry digestive tract.

Crop

[1]

Gizzard

[1]

Examiner Only	
Marks	Remark

- 4 (a) The main output from commercial sheep farming is finished lamb for the meat market.

Lambs can be finished on a **grass-only** diet or a **grass plus meal** diet.

The table below shows the average lamb weight, from birth to slaughter, of lambs finished on a **grass-only** diet.

Age /days	0 (birth)	30	60	90	120	150 (slaughter)
Average lamb weight /kg	3	15	25	34	39	42

- (i) Calculate the average weight gain per day from **birth** to **slaughter**.

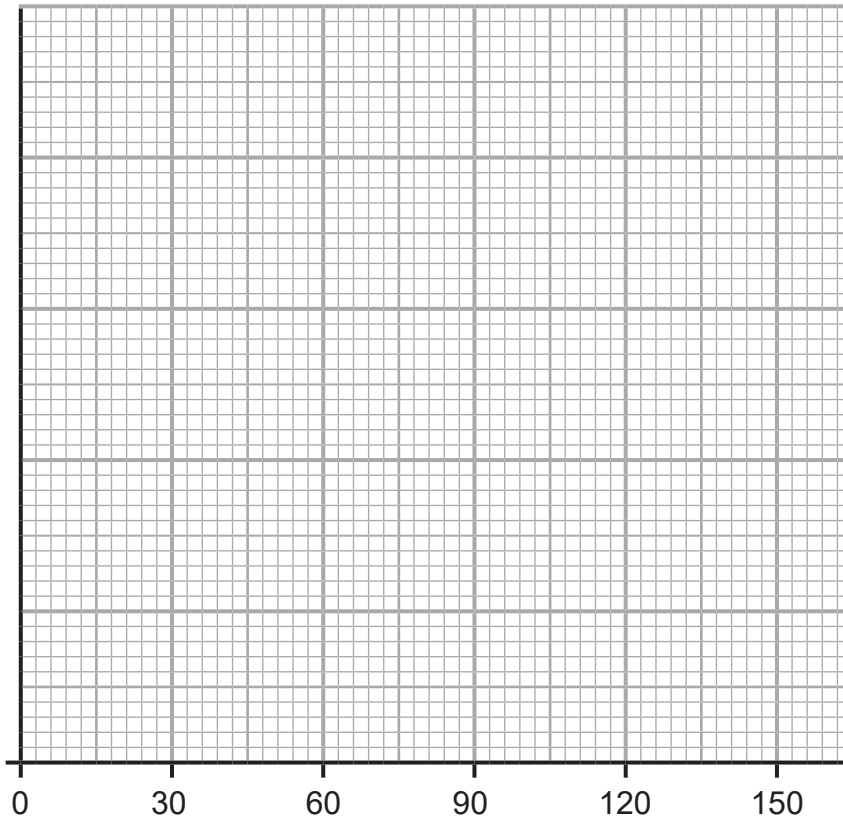
Your answer must be given in **g/day**.

Show your working.

_____ g/day [3]

Examiner Only	
Marks	Remark

- (ii) Using the data given in the table opposite, plot a **line** graph on the graph paper below. Choose a suitable **scale** and **labels**. Draw a **smooth curve** through the points.



[5]

- (b) A different group of lambs was finished on a **grass plus meal** diet for 150 days.

- (i) Draw another curve on the graph which you would expect for the lambs finished on the **grass plus meal** diet. Label it **M**. [2]

- (ii) Give **two** disadvantages of feeding meal to the lambs.

[2]

Examiner Only	
Marks	Remark

5 (a) What is the typical **annual** milk yield you would expect from a dairy cow?

_____ litres [1]

The percentage of intensive dairy farms in Northern Ireland is increasing.

(b) Describe **four** ways in which a dairy farm system could be made more intensive.

[4]

Examiner Only	
Marks	Remark

- 6 Energy can be produced on farms using an anaerobic digester. The photograph below shows an anaerobic digester.



©Getty Images

- (a) Describe how energy is produced using an anaerobic digester.

[2]

- (b) Discuss the advantages and disadvantages of using an anaerobic digester to produce energy.

[4]

Examiner Only	
Marks	Remark

7 (a) Using your knowledge, complete the sentences below about salmonella disease in poultry.

Choose words from the box below.

flukicides	rested	purple combs
laboured breathing	culled	digestive
circulatory	steroids	vaccines
washed	sore feet	reproductive

Salmonella can be prevented by _____ .

Salmonella affects the _____ system of the chicken.

A symptom of salmonella is _____ .

Infected birds must be _____ to control salmonella. [4]

(b) Mastitis is a common disease in dairy cows.

Describe the effects of this disease on a dairy farm.

In your answer you should include:

- the symptoms of mastitis
- the treatment **and** prevention of mastitis
- the impact on the farm business of mastitis

In this question you will be assessed on your written communication skills including the use of specialist terms.

Examiner Only	
Marks	Remark

8 Farmers use selective breeding to improve the genetics of their herd.
A farmer might buy a bull from another country to obtain the best genetics.

(a) Describe what selective breeding is.

[2]

There are many legal requirements for transporting livestock.

(b) State **two** additional legal requirements for transporting livestock over **long distances**.

1. _____

2. _____ [2]

Examiner Only	
Marks	Remark

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