



Coimisiún na Scrúduithe Stáit State Examinations Commission

Leaving Certificate Applied 2009

Vocational Specialism Agriculture/Horticulture (240 marks)

Wednesday 10 June 2009
Morning 9.30 a.m. to 11.00 a.m.

General Directions

1. Write your EXAMINATION NUMBER in this space:

2. WRITE ALL ANSWERS INTO THIS ANSWER BOOK.

THERE ARE TWO SECTIONS IN THIS EXAMINATION

Section One: One question of which **twelve** parts must be answered.
Each part carries 10 marks.

Section Two: Candidate must answer any **four** questions from this section, based on the modules studied. Each question carries 30 marks.

For the Superintendent only	For the Examiner only	
<div style="border: 1px solid black; padding: 10px; width: 80%; margin: auto;"> <p>Centre Stamp</p> </div>	1. Total of end of page totals.	
	2. Aggregate total of all disallowed questions.	
	3. Total mark awarded (1 minus 2).	
	4. Bonus mark for answering through Irish (if applicable).	
	5. Total mark awarded if Irish Bonus. (3 + 4).	
<p><i>Note: The mark in row 3 (or row 5 if an Irish bonus is awarded) must equal the mark in the Total box on the marking grid.</i></p>		

Section One

(120 marks)

Question 1. This is made up of eighteen parts i.e. (a) to (r).

Any 12 parts must be answered. All parts carry equal marks (10 marks each).

1. (a) Identify the garden pest shown in the picture.

Name a garden vegetable attacked by this pest.



(b) The seeds of a thistle plant are scattered by

Name a plant whose seeds are scattered by animals.

(c) Name the garden tool shown in the photograph.

A piece of safety equipment to be used with this tool is



(d) The leaves of which tree are shown in the picture?

Is this tree deciduous or coniferous?



(e) The plant structure shown in the photograph is called a

Name a flowering plant that grows from this structure.



(f) The meat animal that pork is produced from is

Name **one** problem caused by the intensive production of this animal.

(g) The best time of the year to plant a tree is

When protecting a tree from the wind a stake is placed on what side of the tree?

(h) Name the lawn weed shown in the picture.

The particular type of weedkiller used to remove this weed from a lawn is



(i) Accidents can occur in the practice of Agriculture and Horticulture.

Give **two** precautions you would take to prevent accidents in Agriculture/Horticulture.

1. _____

2. _____

(j) An Bord Glas is an organisation involved with Agriculture and Horticulture in Ireland.

Name **two** ways in which An Bord Glas helps the Agriculture/Horticulture industry.

1. _____

2. _____

(k) Name **one** career or job you studied as part of your Agriculture/Horticulture course.

Identify **one** skill **or** **one** area of knowledge required as part of this job or career.

(l) Identify the garden feature shown in the photograph.



Suggest **one** thing you could do to improve the appearance of this structure.

(m) The Irish climate can include long periods of wet weather during the summer season. Suggest **one** problem that this may cause for those involved in Agriculture/Horticulture.

A common disease of plants that grow well in warm, wet conditions is

(n) The warning symbol shown in the picture means

Name a substance that is likely to carry this symbol.



(o) The food material produced as a result of lactation in an animal is

This food material can be changed into other products such as

(p) The poisonous plant shown in the photograph is called

Name **one** other poisonous plant found in grassland.



(q) State **two** actions you could carry out so as to produce high quality flowers **or** fruit **or** vegetables.

1. _____

2. _____

(r) Identify the garden shrub shown in the photograph.

Why is this shrub grown in a garden?



Section Two

(120 marks)

Answer any 4 questions from the following 6 questions, which are based on the modules you have studied. All questions carry equal marks (30 marks each).

2. BASIC HORTICULTURE

- (a) Plants make food by a process known as _____

- (b) Match each term in column A with a term from column C by writing the most appropriate term in column B. **See shaded example.**

Column A	Column B	Column C
Root	Absorbs water	Part of soil formed from decayed plants and animals
Stem		Very fine soil particles
Humus		Absorbs water
Clay		Supports leaf

- (c) Artificial growing media are used more and more in growing plants from seed. Name **three** growing media other than soil that you could use for growing plants.

1. _____ 2. _____ 3. _____

State **two** advantages that artificial growing media have over soil-based growing media.

- 1. _____
- 2. _____

Coarse sand is added to soil-based growing media to improve

(d) The photographs A, B, C and D below show the stages in the taking of a cutting from a plant. The photographs are not in the correct order.



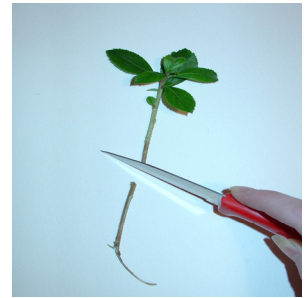
A



B



C



D

Put the letters in the correct order for the taking of a cutting.

Why are the lower leaves removed as shown in photograph A?

Why is the stem cut at an angle as shown in photograph D?

Outline a simple experiment to show that the chemical being used in photograph C actually works.

Equipment. _____

Setting up the experiment. _____

Expected result. _____

3. GARDEN DESIGN

(a) A pergola is normally made from _____

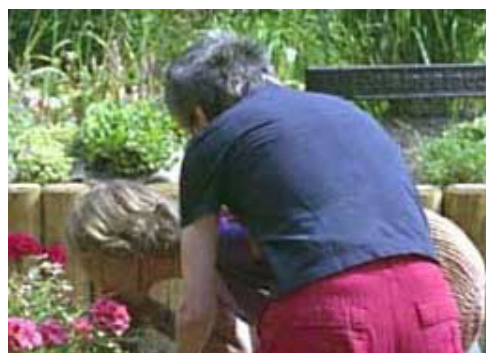
(b) Indicate whether the following statements are true or false by ticking the correct box.

- A low mowing height reduces weed numbers in the lawn. True False
- A very acid soil is best for your lawn. True False
- Nitrogen fertiliser makes the grass very green. True False

(c) The pictures below show some of the features in a garden for visually impaired people.



Picture 1



Picture 2

What features of a garden for visually impaired people do the pictures show?

Picture 1. _____

Picture 2. _____

Suggest **two** other features you would include in a garden for visually impaired people.

1. _____

2. _____

Name **two** things you would **not** include in a garden for visually impaired people for safety reasons.

1. _____

2. _____

(d) During your study of the Garden Design module you looked at putting a hard landscape feature into the garden.

What hard landscape feature might you place in a garden?

Suggest **two** points you would consider in deciding on a location for this hard landscape feature.

1. _____

2. _____

What materials would be required to complete the hard landscape feature you named above?

What steps could you take to reduce the maintenance required by this hard landscape feature?

How would you make sure that this hard landscape feature remains attractive during the winter?

4. FLORISTRY, FRUIT & VEGETABLES

(a) Name a common flower **or** fruit **or** vegetable produced in Ireland.

(b) Complete the following sentences in the spaces provided using the correct words from the list below.

Fungus

Fertile

Wanted

Aphid

Quality

- Mildew is a disease caused by a _____
- The grading of flowers **or** fruits **or** vegetables is most often based on _____
- A weed is a plant which grows where it is not _____

(c) In your study of the Floristry, Fruit & Vegetables module you carried out a survey.

Why did you carry out this survey? _____

Suggest an activity you undertook to prepare for your survey.

What did you learn as a result of your survey?

- (d) A test was carried out on the control of insect pests in a crop of flowers **or** fruit **or** vegetables. The methods used were: 1. Soap suds; 2. Organic spray; 3. Systemic pesticide. The results show how the three methods affected the number of pests on the crop over a period of time.

	Number of insect pests present in the weeks following treatment		
Week No.	Soap suds	Organic spray	Systemic pesticide
1	0	10	0
2	3	0	0
3	9	0	0
4	18	0	5

Which method of control was the least effective?

Suggest **one** advantage and **one** disadvantage for any **two** of the control methods used above.

Control Method. _____

Advantage. _____

Disadvantage. _____

Control Method. _____

Advantage. _____

Disadvantage. _____

Suggest **one** safety precaution you would take when working with chemical sprays.

5. FORESTRY

(a) What colour are the buds on a winter twig of an ash tree? _____

(b) Match each word in column A with the most suitable term in column B to give the correct answer in column C. **See shaded example.**

Column A	Column B	Column C
1 Hardwood	a Cover formed by trees	1 + c
2 Aspect	b Red deal	
3 Canopy	c Broadleaf tree	
4 Pine	d Direction a slope faces	

(c) The photographs below show three pieces of equipment used in the maintenance of forestry.



A



B



C

Name the pieces of equipment A, B and C.
What is each piece of equipment used for?

A. _____

Used for. _____

B. _____

Used for. _____

C. _____

Used for. _____

- (d) As part of your study of the Forestry module you investigated the growing of a tree from seed. Under each of the following headings write down **two** pieces of advice or information that you learned about the growing of a tree.

Overcoming dormancy in tree seeds.

1. _____

2. _____

Planting a tree seed.

1. _____

2. _____

Protecting the young tree.

1. _____

2. _____

Caring for a growing tree.

1. _____

2. _____

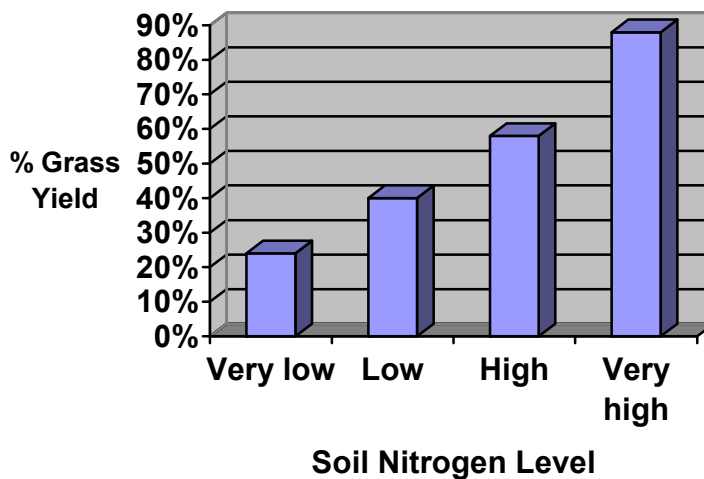
6. GRASS

(a) The topping of grass is _____

(b) Indicate whether the following statements are true or false by ticking the correct box.

- Damp hay will not rot. True False
- The clover plant is high in protein. True False
- The dock plant is poisonous to animals. True False

(c) The bar chart below shows how percentage grass yield varies with soil nitrogen levels.



What does this tell you about the importance of nitrogen for the growth of grass?

Name a good source of organic nitrogen fertiliser.

Suggest **one** disadvantage of using this form of organic fertiliser.

Name a plant you could add to your grass seed mixture to boost the nitrogen levels in soil.

- (d) During your study of the Grass module you investigated the production and storage of hay **or** silage.
Circle one of the words below to indicate whether your answers are in relation to hay **or** silage.

HAY

SILAGE

How would you know that grass is ready for cutting as hay **or** silage?

What type of weather best suits the harvesting of hay **or** silage?

How long is the harvesting period for hay **or** silage?

Suggest **two** management practices you would carry out to make sure that your field of grass is in an ideal state for harvesting as hay **or** silage.

1. _____

2. _____

Suggest **one** precaution you would take to ensure the quality of hay **or** silage during storage.

7. MILK AND MEAT PRODUCTION

(a) A common infection of the udder of a milk producing animal is _____

(b) Match each term in column A with the most suitable term in column B to give the correct answer in column C. **See shaded example.**

Column A	Column B	Column C
1 Dual purpose	a Test carried out on milk	1 + d
2 Antibiotic	b Mineral supplement	
3 Cell count	c Unwanted residue in milk	
4 Salt lick	d Milk and meat	

(c) Answer the following questions on the care and rearing of a milk **or** meat animal.

Name the milk **or** meat animal that you investigated.

State how you would feed the animal while it is pregnant.

How would you know that the animal is close to giving birth?

How would you care for the newborn and its mother immediately after the birth?

- (d) The picture below shows a shed which the farmer wishes to convert into housing for animals in the winter time.



What additional work would you carry out on this structure to adapt it for housing animals?

Comment on how you would deal with effluent and waste water run-off.

What features would you include for the comfort and well-being of the animals?

What features would you include to allow for the safe handling of the animals?

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Question	Mark
Section 1	
1	
Section 2	
2	
3	
4	
5	
6	
7	
Grand Total	
Disallowed	
Total	