



# Coimisiún na Scrúduithe Stáit State Examinations Commission

Leaving Certificate Applied 2005

## Vocational Specialism

### Agriculture/Horticulture (240 marks)

Wednesday 15 June 2005  
Morning 9.30 am to 11.00 am

*For the Superintendent use only*

<b>Centre Stamp</b>
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#### **General Directions**

1. Write your EXAMINATION NUMBER in this space

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2. WRITE ALL ANSWERS INTO THIS ANSWERBOOK.

**For the Examiner only**

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.

Question	Mark
<b>Section 1</b>	
<b>1</b>	
<b>Section 2</b>	
<b>2</b>	
<b>3</b>	
<b>4</b>	
<b>5</b>	
<b>6</b>	
<b>7</b>	
<b>Grand Total</b>	
<b>Disallowed</b>	
<b>Total</b>	

**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 insect shown in the picture.

\_\_\_\_\_

What garden pest does this insect kill?

\_\_\_\_\_



(b) An example of a fungal disease of germinating seeds is

\_\_\_\_\_

This disease can be prevented by

\_\_\_\_\_

(c) Name the garden tool you would use for the following tasks.

Removing weeds \_\_\_\_\_

Taking cuttings \_\_\_\_\_

(d) Identify the garden pest shown in the picture.

\_\_\_\_\_

Suggest a non-chemical method of controlling this pest.

\_\_\_\_\_



(e) The picture shows a flowering plant grown commercially in Ireland.

It is called a \_\_\_\_\_



Name a product other than cut flowers that can be produced from this flowering plant.

\_\_\_\_\_

(f) Name a breed of milk or meat animal that you have studied as part of your Agriculture/ Horticulture course.

\_\_\_\_\_

What feature or features clearly identifies the animal as belonging to this named breed?

\_\_\_\_\_

(g) 'Wind rock' can kill a young tree. What causes the tree to die?

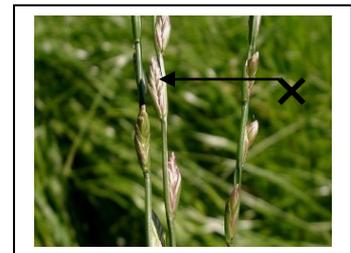
\_\_\_\_\_

How can 'wind rock' be prevented? \_\_\_\_\_

(h) Name the type of grass plant shown in the diagram.

\_\_\_\_\_

Identify the part of the grass plant labelled X.



**X** \_\_\_\_\_

(i) The P.T.O. shaft of a tractor is often the cause of serious accidents. What is a P.T.O. shaft used for?

\_\_\_\_\_

How can it be made safe for use? \_\_\_\_\_

(j) 'Teagasc' is an organisation involved with farming in Ireland. Name **two** ways in which 'Teagasc' helps the farming industry.

1 \_\_\_\_\_

2 \_\_\_\_\_

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

\_\_\_\_\_

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

\_\_\_\_\_

(l) Identify the agricultural machine shown in the diagram.

Name \_\_\_\_\_

Other than cleaning, name a routine maintenance task to be carried out on this machine.

\_\_\_\_\_



(m) An example of a flower or fruit or vegetable grown in greenhouses in Ireland is

\_\_\_\_\_

In what way is the 'white fly' a serious pest in greenhouses? \_\_\_\_\_

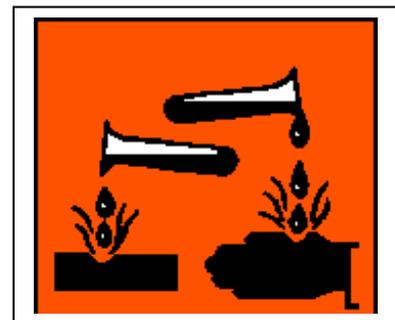
\_\_\_\_\_

(n) The warning symbol shown in the picture means

\_\_\_\_\_

Name one precaution you would take in using a chemical with this symbol on its container.

\_\_\_\_\_



(o) Name a plant other than grass whose seed is added to a grass seed mixture.

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What is the benefit of adding this named seed to the seed mixture?

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(p) Name the tree whose leaf is shown in the diagram

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By what method are the seeds of this tree scattered or dispersed?

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(q) State two actions that would reduce accidents in a work place associated with the agricultural or horticultural industry.

1 \_\_\_\_\_

2 \_\_\_\_\_

(r) Identify the item of garden furniture shown in the diagram.

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Where in the garden would you place this piece of garden furniture?

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**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.

**2. BASIC HORTICULTURE**

(a) The purpose of sand in a potting compost mixture is to \_\_\_\_\_

(b) Match the soil additive in column A with the effect in column C by placing the most appropriate effect in column B. See shaded example.

Column A	Column B	Column C
Potassium	Boosts flower production	Increases soil pH
Nitrogen		Lowers soil pH
Lime		Boosts flower production
Peat Moss		Promotes plant leaf growth

(c) It is necessary for a number of important factors to be present if seeds are to germinate.

Name one of these factors \_\_\_\_\_

In the case of the above named factor describe an experiment you could carry out to show that this factor is necessary for germination. You **may** use diagrams in your answer.

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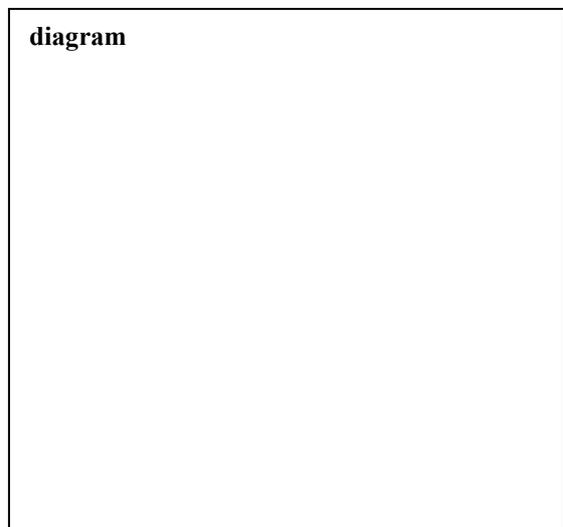
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**diagram**



(d) Taking a plant cutting is a method of producing new plants. The following pictures show the steps taken to ensure a successful cutting.



Step 1



Step 2



Step 3



Step 4

Describe briefly what step is being taken in each picture shown. In the case of each step suggest a reason why this step helps to ensure a successful plant cutting.

Step 1 \_\_\_\_\_

\_\_\_\_\_

Reason \_\_\_\_\_

\_\_\_\_\_

Step 2 \_\_\_\_\_

\_\_\_\_\_

Reason \_\_\_\_\_

\_\_\_\_\_

Step 3 \_\_\_\_\_

\_\_\_\_\_

Reason \_\_\_\_\_

\_\_\_\_\_

Step 4 \_\_\_\_\_

\_\_\_\_\_

Reason \_\_\_\_\_

\_\_\_\_\_



(d) The maintenance of a lawn means that different tasks must be carried out at certain times of the year. Listed below are **four** such tasks. In the case of each task describe briefly what is required to complete the task. State also the best time of the year for carrying out the task.

1. Removing bumps and hollows \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Time of year \_\_\_\_\_

2. Fertilising \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Time of Year \_\_\_\_\_

3. Scarifying \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Time of Year \_\_\_\_\_

4. Aerating \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Time of Year \_\_\_\_\_

## 4. FLORISTRY, FRUIT & VEGETABLES.

(a) A mould or fungus disease of flowers or fruit or vegetables can be controlled using a chemical called a \_\_\_\_\_

(b) Using the words listed below, complete the following sentences in the spaces provided.

- Organic production of flowers or fruit or vegetables does not use \_\_\_\_\_
- Growing of flowers or fruits or vegetables is helped by Ireland's mild \_\_\_\_\_
- Flowers or fruit or vegetables are grown early in the year using a structure called a \_\_\_\_\_

**Climate**

**Cloche**

**Herbicides**

**Soils**

**Pesticides**

**Sundial**

(c) In your study of this module on floristry, fruit and vegetables you carried out an investigation or survey. Using the following headings as a guide, describe how you carried out this investigation or survey and what you learned from it.

1. The purpose of the survey or investigation. \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

2. How the survey or investigation was carried out. \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

3. The results of the survey or investigation. \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

(d) During your study of this module you studied the production of a flower or fruit or vegetable. In the case of a named flower or fruit or vegetable describe what you have learned by writing brief notes under each of the following headings:

Name of flower or fruit or vegetable \_\_\_\_\_

Method of production of the named flower or fruit or vegetable \_\_\_\_\_

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How to ensure that the named flower or fruit or vegetable is a quality product \_\_\_\_\_

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Harvesting and grading of the named flower or fruit or vegetable \_\_\_\_\_

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Storage and transportation of the named flower or fruit or vegetable \_\_\_\_\_

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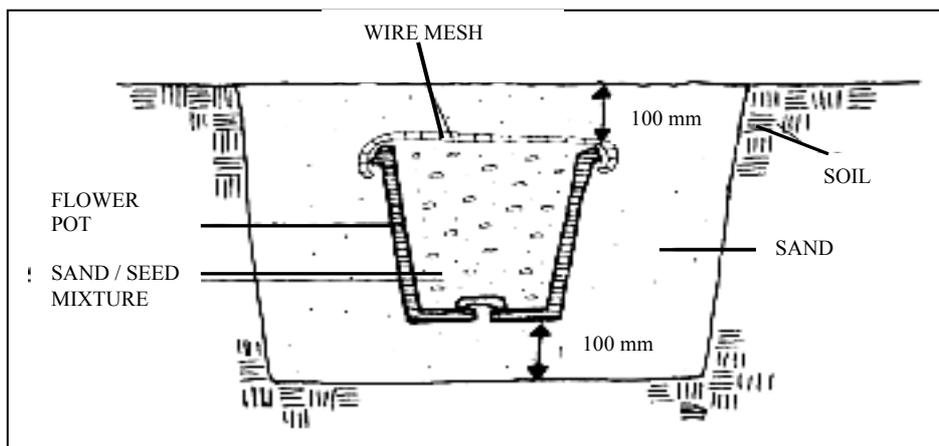
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## 5 FORESTRY

- (a) A coniferous tree that loses its leaves in winter is the \_\_\_\_\_
- (b) Match the correct word in column A with the correct word in column B to give an answer in Column C. **See shaded example**

Column A	Column B	Column C
<b>1 Evergreen</b>	<b>a Ash</b>	<b>1 + c</b>
<b>2 Thorny leaves</b>	<b>b Sweet Chestnut</b>	
<b>3 Black buds</b>	<b>c Pine</b>	
<b>4 Edible fruits</b>	<b>d Holly</b>	

- (c) The diagram below shows the structure of one type of stratification pit.



1. Why is stratification carried out on tree seeds? \_\_\_\_\_

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2. Other than using a pit how might you stratify tree seeds? \_\_\_\_\_

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3. Describe any other process which may need to be carried out to allow a tree seed to germinate.

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(d) As part of your study of this module you studied forestry and a forestry-related industry. Describe what you learned about forestry using the following headings as a guide.

Why most of the forests planted in Ireland are coniferous\_\_\_\_\_

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The various maintenance jobs carried out on a forestry plantation as it grows\_\_\_\_\_

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Health and safety when working in forestry\_\_\_\_\_

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The various products that are got from the harvested timber\_\_\_\_\_

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## 6 GRASS

(a) Pollen is transferred from one grass flower to another by the \_\_\_\_\_

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

- |   |      |       |
|---|------|-------|
| • Silage is rotted grass                        | True | False |
| • Good hay is a better quality feed than silage | True | False |
| • Meadow lands produce the best hay             | True | False |

(c) The photograph shows an area of grassland, which needs to be treated for weeds. You have been asked to carry out an investigation into which one of **three** weed killers would be best at controlling the weed problem.



1. How would you carry out a test to find out which weed killer is best? \_\_\_\_\_

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2. What steps would you take to make sure your result will be a valid one? \_\_\_\_\_

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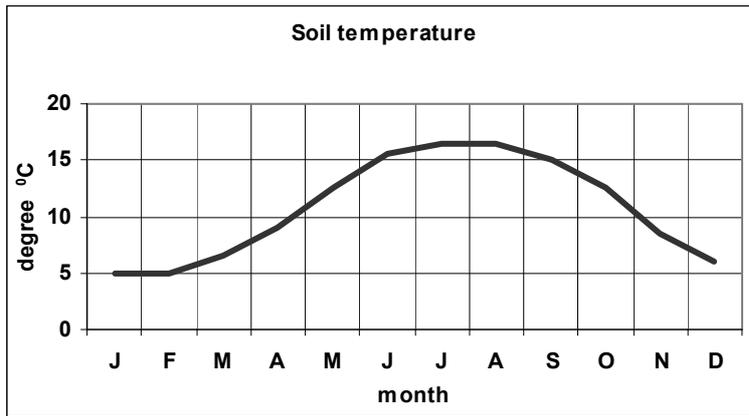
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3. Name **three** items of safety equipment you would use when working with the weed killer.

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(d) The graph shows the soil temperature at various times of the year.



In your opinion what effect does soil temperature have on grass growth? \_\_\_\_\_

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What other climatic factors might affect the growth of grass during the year? \_\_\_\_\_

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With reference to the graph above in what month would you spread fertiliser so as to boost early grass growth?

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What management practices other than the spreading of fertiliser would you carry out to promote grass growth throughout the year?

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## 7 MILK AND MEAT PRODUCTION

- (a) Milk is rich in the mineral calcium which is necessary for healthy\_\_\_\_\_
- (b) Match the correct word in column A with the correct statement in column B to give an answer in column C. **See shaded example**

Column A	Column B	Column C
<b>1</b> Pasteurising	<b>a</b> Making cheese	<b>1 + d</b>
<b>2</b> Fermenting	<b>b</b> Long life milk	
<b>3</b> Souring	<b>c</b> Produces yoghurt	
<b>4</b> Sterilising	<b>d</b> Kills harmful germs	

- (c) Disease control and prevention is an important part of milk or meat production. What actions would you take in each of the following situations to prevent **or** control disease?

Designing and constructing animal housing\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Preparation of winter housing for animals\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Treatment of animals before going back onto the land in spring\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

- (d) The large scale production of milk and meat animals gives rise to waste. This waste may be harmful to humans and the environment and so must be disposed of carefully.

Name **two** waste products of milk or meat production.

Waste product 1
Waste product 2

Describe **one** harmful effect on the environment of one of the waste products mentioned.

Waste product
Harmful effect

Mention **one** way in which one of the wastes mentioned above can be safely disposed of.

Waste product
Safe disposal

In disposing of the waste as suggested by you above what precautions would you take to prevent pollution?

Precaution 1
Precaution 2