



# Coimisiún na Scrúduithe Stáit State Examinations Commission

**Leaving Certificate Applied 2010**

**Vocational Specialism**

**Agriculture/Horticulture**

(240 marks)

**Wednesday 16 June 2010**

**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 PAPER

*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><b>Centre Stamp</b></p> </div>	1. <i>Total of end of page totals.</i>	
	2. <i>Aggregate total of all disallowed questions.</i>	
	3. <i>Total mark awarded (1 minus 2).</i>	
	4. <i>Bonus mark for answering through Irish (if applicable).</i>	
	5. <i>Total mark awarded if Irish Bonus. (3 + 4).</i>	
	<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 question 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) What is growing on the fruit shown in the picture?

\_\_\_\_\_

What chemical would you use to treat this problem?

\_\_\_\_\_



(b) What **types** of grasses are mainly found in a luxury lawn seed mixture?

\_\_\_\_\_

The type of lawn seed mixture sown in high-use areas is

\_\_\_\_\_

(c) Identify the garden pest shown in the photograph.

\_\_\_\_\_

Suggest an **organic** method of controlling this pest.

\_\_\_\_\_



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

\_\_\_\_\_

How does this tree scatter its seeds?

\_\_\_\_\_



(e) The fruit plant shown in the photograph is called

\_\_\_\_\_

Name the vegetative structure used by this plant to produce new plantlets.

\_\_\_\_\_



(f) In animal breeding the letters A.I. mean

\_\_\_\_\_

Give **one** advantage of using A.I. in the breeding of animals.

\_\_\_\_\_

(g) The best time of the year to plant daffodil bulbs is

\_\_\_\_\_

Why are daffodil bulbs usually planted together in groups?

\_\_\_\_\_

(h) Name the piece of agricultural machinery shown in the photograph.

\_\_\_\_\_

What is this machine used for?

\_\_\_\_\_



(i) Suggest **two** precautions you would take to prevent accidents when working with agricultural machinery.

1. \_\_\_\_\_

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

(j) Teagasc is an organisation involved with Agriculture and Horticulture in Ireland. State **two** ways in which Teagasc 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 tool shown in the picture.

\_\_\_\_\_

In caring for this tool, after use, it is important to

\_\_\_\_\_



(m) Plants lose water by a process known as

\_\_\_\_\_

The speed at which this process happens can be affected by

\_\_\_\_\_

(n) The warning symbol shown in the picture means

\_\_\_\_\_

Name a substance that is likely to carry this symbol.

\_\_\_\_\_



(o) Gestation in an animal means

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Give the length of the gestation period of a **named** farm animal.

Name of farm animal. \_\_\_\_\_

Length of gestation period. \_\_\_\_\_

(p) Name a pest **or** a disease that could affect a type of plant grown commercially in Ireland.

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Suggest a prevention method **or** a control method for the named pest **or** disease.

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(q) Name a tree that could be used as a special feature in a garden.

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What is it about the appearance of the named tree that makes it suitable for this purpose?

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(r) Name a wood product produced as a result of the processing of forestry trees.

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Suggest a use for the wood product you have named.

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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) Soil is made up of sand, silt, clay, living organisms and \_\_\_\_\_

(b) Match each term in column A with a description from column C by writing one of the descriptions in each box in column B. See shaded example.

Column A	Column B	Column C
Root	<i>Absorbs water</i>	Plants making food
Irrigation		Growing plants in a liquid medium
Hydroponics		Absorbs water
Photosynthesis		Plant watering system

(c) Soil particles are produced by the weathering of rocks.  
Briefly describe **two** ways in which the weathering of rocks produces soil.

1. \_\_\_\_\_

\_\_\_\_\_

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

\_\_\_\_\_

Describe **one** way in which plants **or** animals assist in the formation of soils.

\_\_\_\_\_

\_\_\_\_\_

(d) The photographs **A**, **B**, **C** and **D** below show four stages in the planting of seeds but they are not in the correct order.



**A**



**B**



**C**



**D**

Put the letters in the correct order for the planting of seeds.

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Describe **two** actions you can take to **prevent** an outbreak of disease in germinating seeds.

Action 1. \_\_\_\_\_

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Action 2. \_\_\_\_\_

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Name a disease which can affect young seedlings.

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In the event of the disease affecting the young seedlings, what type of **chemical** is used to control the disease?

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Suggest **one** precaution you would take when using this chemical.

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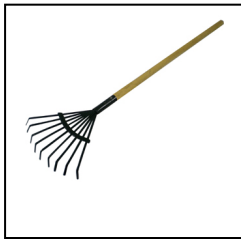
### 3. GARDEN DESIGN

(a) The Copper Beech tree is popular because of the colour of its \_\_\_\_\_

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

- **Formal** garden design uses wild and unruly features. True  False
- Trees are best planted close to the house. True  False
- Crocus plants grow from corms. True  False

(c) The pictures below show some of the tools used in the maintenance of a lawn.



**A**



**B**



**C**



**D**

In the case of each of any **three** of the above tools **A**, **B**, **C** and **D** name the tool and describe what lawn maintenance activity the tool is used for.

Name of tool 1. \_\_\_\_\_

Used for \_\_\_\_\_

Name of tool 2. \_\_\_\_\_

Used for \_\_\_\_\_

Name of tool 3. \_\_\_\_\_

Used for \_\_\_\_\_



(d) You have been asked to plant a flower **or** tree **or** shrub in a garden.  
Describe the steps you would take to successfully plant a flower **or** tree **or** shrub.

Materials and equipment needed.

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Planting the flower **or** tree **or** shrub.

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Caring for the young flower **or** tree **or** shrub.

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## 4. FLORISTRY, FRUIT & VEGETABLES

(a) A cloche or low-sized plastic tunnel is used to \_\_\_\_\_

(b) Choose suitable words from the list below to complete the sentences that follow.

**Pesticide      Freezing      Chilling      Sterilised      Herbicides      Ladybirds**

- It is important that every year a commercial green house is \_\_\_\_\_
- Organic production of flowers **or** fruit **or** vegetables does not use \_\_\_\_\_
- The shelf life of flowers, fruit and vegetables can be increased by \_\_\_\_\_

(c) In your study of this module you investigated pests of flowers **or** fruit **or** vegetables.

1. Name a pest **and** describe how the pest might affect a crop of flowers **or** fruit **or** vegetables.

Name of pest. \_\_\_\_\_

Effect of pest on crop. \_\_\_\_\_

\_\_\_\_\_

2. How would you control the **named** pest?

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

3. What management practices would you put in place to prevent further attack by this pest?

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

- (d) As part of your study of flowers **or** fruit **or** vegetables you carried out an investigation. Describe what you learned from your investigation using the following headings as a guide.

Production Methods.

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Harvesting and Grading.

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Transport and Storage.

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Display and Marketing.

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## 5. FORESTRY

(a) A deciduous coniferous tree commonly grown in Ireland is the \_\_\_\_\_

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

Column A	Column B	Column C
1 Hardwood	a Sticky buds	
2 Stratification	b Cutting the seed coat	2 + d
3 Scarifying	c Broadleaf tree	
4 Horse Chestnut	d Burying seeds	

(c) The photographs below show three pieces of equipment used in weather monitoring.



**A**



**B**



**C**

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

Name of A. \_\_\_\_\_

Used for \_\_\_\_\_

\_\_\_\_\_

Name of B. \_\_\_\_\_

Used for \_\_\_\_\_

\_\_\_\_\_

Name of C. \_\_\_\_\_

Used for \_\_\_\_\_

\_\_\_\_\_

(d) As part of your study of this module you investigated the care and maintenance of an area of forest.  
Answer the following questions in relation to any **two** activities for the care and maintenance of an area of forest.

Activity 1. \_\_\_\_\_

Purpose of activity 1. \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Equipment required. \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

A precaution taken **or** personal safety equipment required.

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Activity 2. \_\_\_\_\_

Purpose of activity 2. \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Equipment required. \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

A precaution taken **or** personal safety equipment required.

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

## 6. GRASS

(a) Grass flowers are pollinated by \_\_\_\_\_

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

- Conserved grass is dried or fermented. True  False
- Spikelet is another name for a grass flower. True  False
- The buttercup improves the feeding quality of grass. True  False

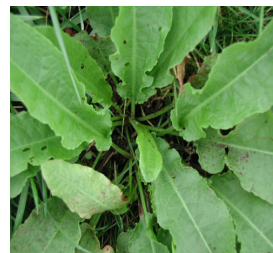
(c) Three grassland plants are shown in the pictures **A**, **B** and **C**.



**A**



**B**



**C**

Name **each** plant **and** comment on its importance in grass production.

Name of A. \_\_\_\_\_

Comment on importance. \_\_\_\_\_

\_\_\_\_\_

Name of B. \_\_\_\_\_

Comment on importance. \_\_\_\_\_

\_\_\_\_\_

Name of C. \_\_\_\_\_

Comment on importance. \_\_\_\_\_

\_\_\_\_\_

- (d) The picture shows part of a field that has been badly managed. The soil is poorly drained and rushes and weeds have grown. Describe in detail any **two** activities you would carry out to change this field into an area of productive grassland.



Details of activity 1. \_\_\_\_\_

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Details of activity 2. \_\_\_\_\_

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## 7. MILK AND MEAT PRODUCTION

(a) The disease grass tetany (also known as milk fever) is caused by a lack of the mineral \_\_\_\_\_

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

Column A	Column B	Column C
1 Dual Purpose	a Disease of the udder	
2 Castration	b Milk rich in antibodies	
3 Mastitis	c Neutering of young bulls	
4 Colostrum	d Milk and meat animal	4 + b

(c) During your study of this module you carried out an investigation into some aspect of milk and meat production.

What did you investigate?

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What methods did you use in your investigation?

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What were the main findings of your investigation?

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(d) The pictures show two slurry storage systems.



**Slurry Tank**



**Slurry Pit**

Which storage system do you consider to be better **and** give a reason for your answer?

Better system. \_\_\_\_\_

Reason. \_\_\_\_\_

\_\_\_\_\_

State **two** uses of slurry.

Use 1. \_\_\_\_\_

\_\_\_\_\_

Use 2. \_\_\_\_\_

\_\_\_\_\_

Name **one** danger associated with the storage of large amounts of slurry.

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

State **one** precaution you must take when disposing of slurry.

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

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<b>Question</b>	<b>Mark</b>
<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>	
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