



Coimisiún na Scrúduithe Stáit State Examinations Commission

Leaving Certificate Applied 2015

Vocational Specialism

Agriculture/Horticulture

(240 marks)

Wednesday, 10 June 2015, Morning, 9.30 to 11.00.

General Directions

1. Write your EXAMINATION NUMBER in this space:

2. WRITE ALL ANSWERS INTO THIS ANSWERBOOK.

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: Candidates 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: fit-content; 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 if Irish bonus awarded (3 plus 4).	
<p><i>Note: The mark in row 3 (or in row 5 if an Irish bonus is awarded) must equal the mark in the 'Total' box on the marking grid on page 20.</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) Name the type of plant shown in the photograph.

This plant is pollinated by

(b) Plants use sunlight to produce food in a process called

What gas do plants **use** during the **night**?

(c) The dark-coloured material in soil formed by the decay of plants and animals is called

Give **one** reason why this organic material is important in soil.

(d) In designing a garden the term ‘aspect’ means

Suggest **one** reason why large trees are **not** suitable for small gardens.

(e) Name the tree shown in the photograph, which provides colour in winter.

Name **one** other plant which provides colour in winter.



(f) The common lawn weed shown in the photograph is called

Name **one** other weed commonly found in lawns in Ireland.



(g) Why do some shops use a mist spraying system on their fresh flower, fruit and vegetable displays?

Suggest **one** reason why the price of flowers, fruit or vegetables can vary throughout the year.

(h) The structure shown in the photograph, used for the commercial production of flowers, fruit and vegetables, is called

Name **one** plant care system that is automated in such a structure.



(i) Give **two** ways the environment can be affected by spraying plants with insecticides.

1. _____

2. _____

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

State **one** skill associated with the career or job referred to above.

(k) Suggest **two** ways in which accidents can be avoided when working in forestry.

1. _____

2. _____

(l) Name the tree whose seeds are shown in the photograph.

A tree that has black buds in winter is



(m) Name a variety of grass commonly used in silage production in Ireland.

Suggest **one** reason why clover is valuable in grassland.

(n) Name the poisonous plant shown in the photograph.

What is the best way of controlling this plant in grassland?



(o) Name a notifiable disease of milk or meat producing animals.

Give **one** symptom of the disease referred to above.

(p) This warning symbol, found on many chemical containers, means

Give **one** precaution you should take when working with chemicals marked with this symbol.



(q) What is meant by a 'dual purpose' breed of farm animal?

Name a dual purpose breed of farm animal.

(r) The photograph shows a field shelter which may be used in a particular type of meat producing enterprise.

In which **type of enterprise** might such a shelter be used?

State **one** benefit of the **type of enterprise** referred to above.



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) For seeds to germinate successfully they need a suitable temperature, water and _____

(b) Write each description from column C into column B to match an item from column A. See shaded example.

Column A	Column B	Column C
Rake	<i>To gather dead leaves</i>	To make holes for plants
Secateurs		To remove weeds
Hoe		To gather dead leaves
Dibber		To prune plants

(c) State the purpose of **each** of the following additives in a potting compost:

Vermiculite. _____

Sand. _____

Slow release fertiliser. _____

(d) The pictures A, B, C and D below show steps in the taking of a stem cutting but they are not in the correct order.



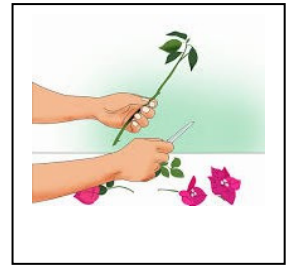
A



B



C



D

Write the above letters in the correct order for the taking of a stem cutting.

Step 1. _____ Step 2. _____ Step 3. _____ Step 4. _____

Describe in detail how to take a stem cutting by describing what is happening in each of the steps shown

Step 1. _____

Step 2. _____

Step 3. _____

Step 4. _____

3. GARDEN DESIGN

(a) Garden shrubs provide colour using their flowers, foliage and _____

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

- Formal gardens have a symmetrical design True False
- A patio is a hard landscape feature True False
- Trees or flower beds should never be in the centre of a lawn True False

(c) The photographs below were taken before and after the planting of a tree.



Before planting



After planting

Write a brief description of each of the following steps in the planting of a tree.

Digging and preparing the hole. _____

Preparing the root ball. _____

Supporting the tree. _____

(d) This photograph, taken at mid-day, shows a house with most of its garden to the front.



Identify **two** problems with this garden layout and suggest how the layout might be improved in **each** case.

Problem 1. _____

Suggested improvement. _____

Problem 2. _____

Suggested improvement. _____

In what direction is the front of the house facing?

Indicate, by placing an **X** on the photograph, the best place to locate a patio and barbecue area.

Give a reason why you have chosen this location for the patio and barbecue area.

4. FLORISTRY, FRUIT & VEGETABLES.

(a) A beer trap is used for the organic control of _____

(b) Complete the sentences below using the most suitable terms from the following list.

List: **Hose** **Cloche** **Less than 7** **Fungicide** **Mulch** **More than 7**

- An early crop can be grown using a _____
- Most crops are grown in soil whose pH is _____
- Weeds in crops can be controlled using a _____

(c) In your study of Floristry, Fruit and Vegetables you looked at ways in which flowers **or** fruit **or** vegetables can contribute to our health and wellbeing.

Describe **three** ways in which flowers **or** fruit **or** vegetables can contribute to our health and wellbeing.

1. _____

2. _____

3. _____

- (d) The table below gives information on the value of flower, fruit and vegetable production between 2004 and 2007.

Sector	2004 € millions	2007 € millions	Change from 2004 to 2007
Mushrooms	114.5	97.4	- 15%
Field vegetables	56.7	63.3	+12%
Protected crops	36.8	45	+ 22%
Fruit crops	8.9	8	- 10%
TOTAL	216.9	213.7	- 1.5%

Suggest **two** reasons for the decline in total value between 2004 and 2007.

1. _____

2. _____

Suggest **two** reasons for the increase in the value of 'Protected crops' between 2004 and 2007.

1. _____

2. _____

Identify **one** challenge to the continued growth in the production of flowers, fruit and vegetables in Ireland.

Why is a healthy bee population important to the floristry, fruit and vegetable industry?

5. FORESTRY

(a) A coniferous tree which sheds its leaves in winter is the _____

(b) Match each word in column A with a description from column B to give an answer in column C. **See shaded example.**

Column A	Column B	Column C
1 Evergreen	a Uppermost branches and leaves of a tree	1 + c
2 Trunk	b The circumference of a tree trunk	
3 Crown	c Does not lose all its leaves in winter	
4 Girth	d Main woody stem of a tree	

(c) Identify the weather recording instruments shown in the photographs below.



A



B



C

A. _____

B. _____

C. _____

Give **one** reason why Ireland is a good place for the growth of coniferous forests.

- (d) Seeds of some trees from different parts of the world will only germinate if they are exposed to certain environmental conditions.
Suggest four such environmental conditions that might be necessary for these seeds to germinate.

Suggested environmental condition 1.

Suggested environmental condition 2.

Suggested environmental condition 3.

Suggested environmental condition 4.

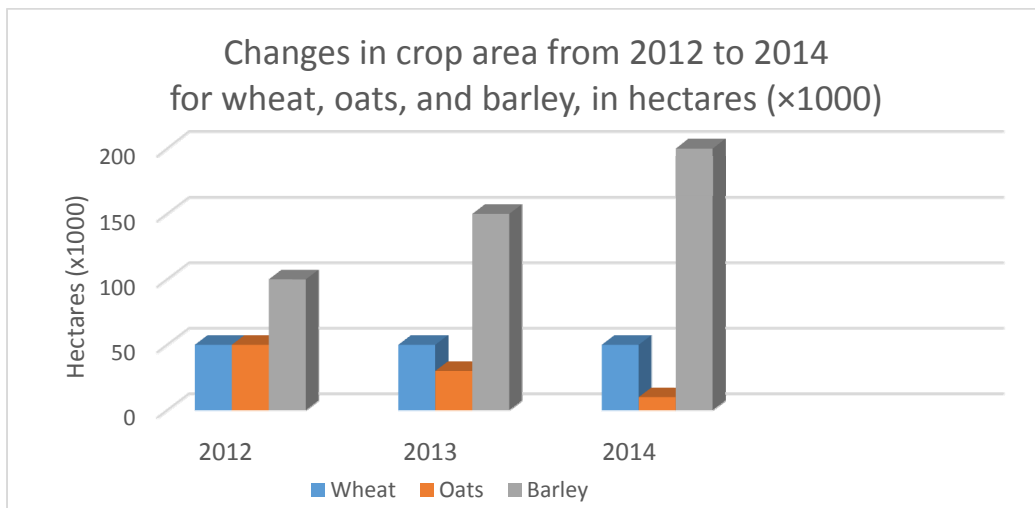
6. GRASS

(a) Name a method used to drain grassland _____

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

- The buttercup plant is important for healthy grass True False
- Acid is often used in the conservation of grass True False
- Scutch grass is a weed True False

(c) The chart below shows changes in crop area for wheat, oats, and barley from 2012 to 2014.



Use the above chart to answer the following questions.

Which crop shows the **greatest increase** in crop area over the time period shown? _____

Which crop shows the **greatest decrease** in crop area over the time period shown? _____

Suggest **two** reasons why crop area decreases for some crops.

Reason 1: _____

Reason 2: _____

(d) The photograph below shows a machine used in the conservation of grass.



This machine is called a _____

What does this machine do in the conservation of grass?

Name **two** other pieces of machinery used in conserving grass and describe what each one does.

Name of piece of machinery 1. _____

Work done. _____

Name of piece of machinery 2. _____

Work done. _____

Give **two** safety precautions you should take when working with these machines.

1. _____

2. _____

7. MILK AND MEAT PRODUCTION

- (a) Red meat is rich in the mineral _____
- (b) Match each animal in column A with its description in column B to give an answer in column C.
See shaded example

Column A	Column B	Column C
1 Calf	a Young pregnant female	1 + d
2 Bullock	b Young female	
3 Springer	c Young castrated male	
4 Heifer	d Newborn	

- (c) The photograph shows an animal housing unit being built.



What structure is visible in the foreground (front part of the photograph)?

What is the purpose of this type of structure in an animal housing unit?

Give **one** danger associated with this type of structure. _____

How should a farmer deal with this danger? _____

- (d) During your study of the Milk and Meat Production module you visited a farm.
Describe what you learned during your visit, using the following headings as a guide.

Good design of animal housing.

Arrangements for feeding animals.

Hygiene and the prevention of disease.

Breeding good quality animals.

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