

Cork Institute of Technology
Bachelor of Science (Honours) in Herbal Science – Stage 2
(NFQ Level 8)
Summer 2007
Horticulture
(Time: 3 Hours)

Instructions
Answer FIVE questions.

Examiners: Mr. B. O'Dwyer
Dr. S. Kumar
Dr. D. Corrigan
Mr. E. Walsh

Q1. What causes the onset of “physiological” seed dormancy and “physical” seed dormancy? Discuss ways by which each of the two types of seed dormancy can be overcome taking into account your earlier work on *Crataegus monogyna*. (20 marks)

Q2. (a) Match each of the following terms with a correct definition for underground plant structures:

_____ *Corm* _____ *Rhizome* _____ *Tuber*
_____ *Bulb* _____ *Tuberous root* _____ *Stolon*

- (i) An underground, horizontal stem usually producing roots and shoots at the nodes.
 - (ii) A short underground stem that is covered by fleshy, enlarged leaf bases containing stored food.
 - (iii) An enlarged, short, fleshy underground stem.
 - (iv) An enlarged or swollen root that was developed originally as a fibrous root.
 - (v) A horizontal stem that grows along the ground surface, often producing roots and shoots at the nodes.
 - (vi) The swollen base of a stem that is covered with dry papery leaves.
- (b) Discuss various forms of asexual reproduction. What are the advantages of this method over sexual methods such as seed propagation? (20 marks)

- Q3. In purchasing a young tree for cultivation describe the features that make up a good specimen, and outline a strategy that could maintain a good structure on the tree. (20 marks)
- Q4. Describe the ideal conditions for harvesting and storing herbs. (20 marks)
- Q5. Describe the main features of Biodynamic farming practice. (20 marks)
- Q6. Outline some of the guidelines suggested in relation to the planting and harvesting of biodynamic crops. (20 marks)
- Q7. Outline a simple management programme for keeping bees, and refer to the main problems encountered by a beekeeper. (20 marks)
- Q8. Discuss the commercial cultivation of sauce and pepper mint (*Mentha* spp) and focus on the differences between these two species in terms of specific management practices, harvesting and their uses. (20 marks)

