

Autumn Examinations 2012/13

Module Title: Plant Propagation

Module Code: AGRI7004

School: Science & Informatics and Business

Programme Title: BSc (Hons) in Herbal Science – Year 2
BSc in Horticulture – Year 1

Programme Code: SHERB_8_Y2,
BHORT_7_Y1

External Examiner(s): Prof Peter Jones
Internal Examiner(s): Mr. George Murphy

Instructions: Answer any Four Questions
All questions carry equal marks.

Duration: 2 Hours

Sitting: Autumn 2013

Requirements for this examination:

Note to Candidates: Please check the Programme Title and the Module Title to ensure that you have received the correct examination paper.
If in doubt please contact an Invigilator.

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- Q.1 (a)** Briefly describe what is meant by the phrase “seed dormancy”. **5 Marks**
- (b)** List and briefly discuss **THREE** environmental factors which are necessary for “normal” seed germination. **12 Marks**
- (c)** Name **AND** describe **ONE** treatment which may be used to break seed dormancy including the rationale behind the treatment. **8 Marks**
- Q.2 (a)** Describe **THREE** features of an ideal “mother stock” selection in vegetative propagation. **12 Marks**
- (b)** List **THREE** practices or techniques which can be employed to improve or promote the production of suitable material for vegetative propagation in a named plant. **4 Marks**
- (c)** Describe **ONE** of the practices named above explaining how it benefits or improves the chances of success of a vegetative plant propagation protocol **9 Marks**
- Q.3 (a)** Briefly define a graft giving a named example of a commonly grafted plant. **5 Marks**
- (b)** Briefly describe **THREE** reasons why grafting is used as a technique. **12 Marks**
- (c)** Briefly describe **TWO** considerations that must be taken into account when choosing a root for grafting. **6 Marks**
- (d)** Name **ONE** type of graft. **2 Marks**

- Q. 4 (a)** **Briefly** describe the main benefit to the parent plant with the use of layering for propagation. **4 Marks**
- (b) Describe **TWO** techniques used to girdle a stem for layering. **8 Marks**
- (c) **Describe** the process of serpentine/compound layering. Diagrams may be used to aid explanation. **12 Marks**
- (d) Name a plant which is suitable for propagation by compound layering. **1 Mark**
- Q. 5 (a).** With reference to cuttings describe what is meant by “greenwood” **4 Marks**
- (b) **Briefly** describe the conditions necessary to produce plants via greenwood cuttings. **4 Marks**
- (c) Describe and explain the process or propagating a named plant via greenwood cuttings. **17 Marks**