



**HDY-003-1143003** Seat No. \_\_\_\_\_

**M. Sc. (Botany) (Sem. III) (CBCS) Examination**

November / December – 2017

**BOT - 315 : Plant Propagation Techniques**

*(Elective) (New Course)*

**Faculty Code : 001**

**Subject Code : 1143003**

Time :  $2\frac{1}{2}$  Hours]

[Total Marks : 70

**1 Answer the following : (Any Seven) 2×7=14**

- (a) Explain briefly the role of auxin in vegetative propagation.
- (b) Describe different types of Green houses.
- (c) Enlist different environmental factors that affect plant propagation.
- (d) What are chimeras?
- (e) Define scion and rootstock.
- (f) Distinguish between micropropagation and vegetative propagation
- (g) Describe growth hormones that are used in plant tissue culture media.
- (h) Distinguish between explant and mother plant.
- (i) What is difference between anther and pollen culture?
- (j) What is the need for artificial pollination?

**2 Answer Any two the following : 2×7=14**

- (a) Describe different techniques of plant propagation.
- (b) What are the important components of a nursery? Explain steps involved in nursery development.
- (c) Describe the genetic factor that control asexual and sexual propagation of plants.

- 3** Briefly describe the following : **2×7=14**  
(a) Grafting in plants and its application.  
(b) Types of layering in plants and its application.

**OR**

- 3** Briefly describe the following : **2×7=14**  
(a) Difference between budding and cutting. Add a note on types of cutting.  
(b) Selection and management of clones in vegetative propagation.

- 4** Write short notes on the following : **2×7=14**  
(a) Basic steps involved in Plant Tissue Culture Technique  
(b) Protoplast Culture

- 5** Briefly describe Any **two** of the following : **2×7=14**  
(a) Somaclonal variation  
(b) Artificial seeds and their significance  
(c) Secondary metabolite production in tissue culture  
(d) Applications of tissue culture in crop improvement.

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