

Code No. 1616

**FACULTY OF SCIENCE**

**B. Sc. (Vocational) III – Year Examination, March / April 2014**

**Subject: Biotechnology**

**Paper – VI: Plant and Environmental Biotechnology**

**Time: 3 Hours**

**Max.Marks: 75**

**Note: Answer all questions. All questions carry equal marks.**

- 1 (a) Briefly discuss about the role of growth regulators in callus induction and organ differentiation.

**OR**

- (b) What are somaclonal variations? Discuss with suitable examples and their use in agriculture.

- 2 (a) Explain in detail about the fusion of protoplasts and somatic hybridization.

**OR**

- (b) Discuss in brief about the marker aided selection for plant improvement.

- 3 (a) Elaborate on the solar energy converters and photovoltaic cells.

**OR**

- (b) Explain in detail about the cultivation of VAM and biofertilizers.

- 4 (a) Discuss briefly about the production of hydrogen from bacteria and algae.

**OR**

- (b) Write in detail about the micropropagation of elite plants.

- 5 Write short notes on any THREE of the following:

- a) Applications of wide hybridization in plant breeding
- b) Organogenesis
- c) Cybrids
- d) Production of biogas
- e) Use of gasohol.

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