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**BG—29—2016**

**FACULTY OF SCIENCE**

**B.Sc. (Second Year) (Fourth Semester) EXAMINATION**

**OCTOBER/NOVEMBER, 2016**

**(Revised Course)**

**BIOTECHNOLOGY**

**Paper BTT-4.4**

**(Plant and Animal Cell Culture)**

**(Saturday, 26-11-2016)**

**Time : 2.00 p.m. to 5.00 p.m.**

*Time—Three Hours*

*Maximum Marks—80*

*N.B. :—* (i) Attempt *All* questions.

(ii) Represent your answers with suitable diagrams, schemes whenever necessary.

1. (a) What is Basal Salt Solution and discuss its components and applications. 10

(b) Describe Callus Culture with applications. 10

2. (a) Write a note on media components used in P.T.C. 8

(b) What is Micropropagation ? Explain its role of importance in P.T.C. 7

*Or*

(c) Discuss organ culture and its applications. 8

(d) What is Somatic hybridization ? Add a note on its advantages. 7

3. (a) Write in detail components of Serum. 8

(b) Write a note on Flowcytometry. 7

*Or*

(c) What is Primary Cell Culture ? Eescribe in detail cell line. 8

(d) Write a note on cell senescence. 7

P.T.O.

4. (a) Discuss Embryo culture with advantages and disadvantages. 8  
(b) Describe in detail Monoclonal Antibody Production. 7  
Or  
(c) What are stem cells ? Discuss its applications. 8  
(d) Discuss significance of P.T.C. 7
5. Write short notes on (any *three*) : 15  
(a) Re-differentiation  
(b) Contact inhibition  
(c) Cloning  
(d) Vaccines  
(e) Tissue engineering.