

Roll No. ....

Total No. of Questions : 9]  
(2034)

[Total No. of Printed Pages : 4

**UG (CBCS) IIIrd Year Annual Examination**  
**3006**

**B.Sc. BOTANY**  
**(Economic Botany and Biotechnology)**  
**(DSE-1A)**  
**Paper : BOTA 301**

**Time : 3 Hours]**

**[Maximum Marks : 50**

**Note** :- Attempt *five* questions in all, selecting *one* question each from the Sections-B, C, D and E. Question No. 1 of Section-A is compulsory. Attempt all subparts of a question together.

**Section-A**

**(Compulsory Question)**

1. (i) Name the center of origin of 'Rice'.
- (ii) Wheat belongs to family .....



- (iii) Pulses belong to family .....
- (iv) Give the botanical name of 'Tulsi'.
- (v) What is 'Black Tea' ?
- (vi) Expand the term RFLP.
- (vii) Northern blotting is used to detect .....
- (viii) Define Vector.
- (ix) Foreign DNA is also called as Passenger DNA.

(True/False)

- (x) Name a disease caused by SNPs.

1×10=10

### Section-B

2. Write short notes on the following :

- (a) Morphology of wheat
- (b) Soyabean as a vegetable
- (c) Vavilov's centers of origin

3,3,4

3. (a) Explain 'Clove' and 'Black Pepper' as spices.

(b) Write in short about medicinal value of 'Ginger'. 6,4

### Section-C

4. (a) Describe origin, distribution, cultivation practices and improved varieties of coffee. 8,2
- (b) Explain the term 'Ratooning'.
5. (a) Describe *Emblica* and *Cathranthus* as medicinal plants. 7,3
- (b) Write in short the economic uses of Sugarcane.

### Section-D

6. Write short notes on any *two* of the following :
- (a) Embryo culture
- (b) Haploid production
- (c) Micropropagation 5,5
7. (a) What are the applications of plant tissue culture in agriculture, horticulture and forestry ? 8,2
- (b) Define Somatic Embryogenesis.



## Section-E

8. Write short notes on any *two* of the following :

- (a) Southern blotting
- (b) Monoclonal antibodies
- (c) Agarose electrophoresis

5,5

9. (a) Give a general account on PCR and its types.

(b) RAPD and RFLP as molecular DNA markers. 5,5