

**A-3-B**

Roll No.....

Total No. of Questions : 14]

[Total No. of Printed Pages : 3

**12<sup>th</sup>SZARJD22**

**6003-B**

**BOTANY**

**(Biology)**

Time : 1.15 Hours]

[Maximum Marks : 35

**Section-A**

1 each

1. Study of ..... is called Anthology. (Fill in the blank)
2. Arrangement of nuclei in normal dicot embryo sac is :  
(A) 3 + 3 + 2  
(B) 2 + 4 + 2  
~~(C) 3 + 2 + 3~~  
(D) 2 + 3 + 3
3. F<sub>2</sub> generation in a Mendelian cross showed that both genotypic and phenotypic ratios are same as 1 : 2 : 1. It represents a case of :  
(A) Epistasis  
(B) Duplicate genes  
(C) Monohybrid cross with complete dominance  
~~(D) Monohybrid cross with incomplete dominance~~
4. Name a green alga used in the production of single cell protein.

12<sup>th</sup>SZARJD22-6003-B

**A-3-B**

Turn Over

( 2 )

**Section-B**

2 each

5. Differentiate between Cleistogamous and Chasmogamous flowers.
6. CFCs are widely used as refrigerants. Then why is it suggested to reduce their emission as far as possible ?
7. Differentiate between an upright and an inverted pyramid of biomass with examples.

*Or*

“Whereas matter recycles in an ecosystem, energy flows in one direction only.” Explain the statement.

**Section-C**

3 each

8. Describe the process of decomposition.
9. What are GM organisms ? What is their importance ?
10. Describe the importance of mycorrhiza, cyanobacteria and bacteria as biofertilizers.
11. With the help of well labelled diagrams explain the structure of an unfertilized and a fertilized embryo sac.
12. Define ‘Genetic Code.’ What are its characteristics ?

*Or*

Write explanatory note on the central dogma and central dogma reverse of molecular biology.

12<sup>th</sup> SZARJD22—6003-B

**A-3-B**

( 3 )

**Section-D**

5 each

13. What do you understand by Gene Expression ? Explain Lac Operon.

*Or*

Give an experimental verification of DNA as genetic material.

14. Discuss the various types of interactions between the members of different species.

*Or*

Define Xerosere. Describe the process of ecological succession on a bare rock.

12<sup>th</sup>SZARJD22-6003-B

**A-3-B**