

**A-3-A**

Roll No. \_\_\_\_\_

Total No. of Questions : 14]

[Total No. of Printed Pages : 3

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

**6003-A**

**BOTANY**

**(Biology)**

Time : 1.15 Hours]

[Maximum Marks : 35

**Section-A**

1 each

1. \_\_\_\_\_ is called Anthesis. (Fill in the blank)

2. In angiosperms, functional megaspore develops into :

- (A) Endosperm
- (B) Pollen sac
- (C) Embryo sac
- (D) Ovule

3. The genotype of a plant showing a dominant phenotype can be determined by :

- (A) Back cross
- (B) Test cross
- (C) Dihybrid cross
- (D) Pedigree analysis

4. Name the chemical used for doubling the chromosome number.

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Turn Over

**A-3-A**

( 2 )

**Section-B**

2 each

5. Differentiate between Autogamy and Xenogamy.
6. What is Cryopreservation ?
7. Differentiate between primary productivity and secondary productivity.

*Or*

Maximum number of trophic levels is hardly 3-5 in terrestrial ecosystems. Explain, why ?

**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. <https://www.jkboseonline.com>
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.

**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.

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( 3 )

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.

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**A-3-A**

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