

**B-10-X**

Roll No.....

Total No. of Questions : 16]

[Total No. of Printed Pages : 4

**12<sup>th</sup>ARM(SZ)JKUT2024**

**1110-X**

**BOTANY**

**(Biology)**

Time : 1½ Hours]

[Maximum Marks : 35

**SECTION-A**

1 each

1. A diploid organism is heterozygous for 3 loci; how many types of gametes can be produced ?

(A) 3

(B) 6

(C) 8

(D) 12

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2. Find the odd one :

(A) *Cephalosporium acremonium*

(B) *Acetobacter aceti*

(C) *Clostridium butylicum*

(D) *Lactobacillus*

3. Which one is not a biofertilizer ?

(A) *Azotobacter*

(B) *Bacillus thuringiensis*

(C) *Clostridium*

(D) *Azolla*

4. Which is an *in-situ* method of conservation ?

(A) Cryopreservation

(B) Biosphere Reserves

(C) Zoological Parks

(D) Wildlife Safari Parks

( 3 )

5. The second trophic level in a lake is :

(A) Phytoplankton

(B) Zooplankton

(C) Benthos

(D) Fishes

**SECTION-B**

2 each

6. Define Apomixis. Give its importance.

7. What is Double fertilization ?

8. Write a note on various types of processes that occur simultaneously during decomposition of detritus. <https://www.jkboseonline.com>

9. What is the key difference between Primary and Secondary sewage treatment ?

10. Draw schematic structure of a Transcription unit.

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**SECTION-C**

3 each

11. What are Multiple Alleles ? Give their characteristics.
12. What is Tissue Culture ? Give its applications.
13. Flowers have evolved various strategies to prevent self pollination.  
Write a note on those strategies.
14. What are Hotspots ? Give an example and also write criteria for hotspots.
15. What are properties of genetic material ?

**SECTION-D**

5

16. Describe the attributes that populations possess but not individuals.

*Or*

Define Ecological Pyramid. Name the three types of ecological pyramids. What information is conveyed by each pyramid regarding structure, functions and energy in the ecosystem ?

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