

B-10-X

Roll No.....

Total No. of Questions : 16]

[Total No. of Printed Pages : 4

12thARM(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 ?