

B-10-X

Roll No.....

Total No. of Questions : 16]

[Total No. of Printed Pages : 4

12thARF(SZ)JKUT2024-25

310-X

BOTANY

(Biology)

Time : 1½ Hours]

[Maximum Marks : 35

SECTION-A

1 each

1. Which step does not occur in translation ?

(A) Initiation

(B) Elongation

(C) Termination

(D) Replication

2. A water body has high BOD when it is :

(A) Polluted

(B) Clean

(C) Inhabited by a lot of life forms

(D) None of these

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(2)

3. Biogas production is carried out by :

- (A) Halophiles
- (B) Thermoacidophiles
- (C) Luminescent bacteria
- (D) Methanogens

4. Which ecosystem has the highest primary productivity ?

- (A) Open ocean
- (B) Temperate evergreen forest
- (C) Tropical deciduous forest
- (D) Tropical rain forest

5. Hotspot of biodiversity is an area on earth that :

- (A) Contains many endemic species
- (B) Shows greater species diversity
- (C) Is under the threat of habitat degradation
- (D) All of these

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(3)

SECTION-B

2 each

6. Define Parthenocarpy. Differentiate between vegetative and stimulative parthenocarpy.
7. What are GM organisms ?
8. Differentiate between natality and mortality.
9. Define Pyramid of energy. Explain why pyramid of energy is always upright ? <https://www.jkboseonline.com>
10. Name few outbreeding devices. Briefly describe any *one* of them.

SECTION-C

3 each

11. How does a microspore develop into two male gametes in angiosperms ? Describe the process with suitable diagrams.
12. Define Pleiotropic Gene. Give examples, one each from plants and animals.
13. Describe various applications of Plant Tissue Culture.

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14. Briefly describe the following processes involved in decomposition :

(i) Fragmentation

(ii) Catabolism

(iii) Leaching

15. What are Ramsar Sites ? What is their importance ? Name some Ramsar Sites of India.

SECTION-D

5

16. What is an Operon ? Explain an Inducible Operon.

Or

State the principle of Independent Assortment. Explain it with a dihybrid cross. Name *one* exception to this principle.