

X-17-B

Roll No.

Total No. of Questions : 14]

[Total No. of Printed Pages : 3

11thARJKLK23

9517-B

BOTANY

(BIOLOGY)

Time : 1½ Hours]

[Maximum Marks : 35

Section-A

1 each

1. Define a false fruit.
2. Which growth regulator is also known as stress hormone ?
3. What is Vernalization ?
4. Water potential of pure water is always :

(A) Negative

(B) Positive

(C) Zero

(D) None of these

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Turn Over

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Section-B

2 each

5. Describe the process of plasmolysis and deplasmolysis in plant cells.
6. Differentiate between Stomata and Hydathode.
7. Describe briefly 'Verticillaster inflorescence'.

Or

Define the following :

- (a) Monadelphous stamens
- (b) Apocarpous gynaecium

Section-C

3 each

8. What is ICBN ? What rules of nomenclature were framed under Binomial system of nomenclature ?

Or

Define Taxonomic Hierarchy. List the categories used in classification of organisms.

9. What is Phyllotaxy ? Explain and illustrate its types.
10. Distinguish between green, brown and red algae on the basis of distribution, type of pigments and reserve food.
11. What are Vascular Bundles ? What are their different types ?
12. Define Respiratory Quotient. Give *one* example each for its value :
 - (a) Equal to unity
 - (b) Less than unity

Section-D

5 each

13. What criteria was used by R.H. Whittaker for classifying organisms into kingdoms ? With the help of a phylogenetic tree describe the evolutionary relationship among the various kingdoms.

Or

What is a Taxonomic aid ? Name any two taxonomic aids other than botanical garden. Add a note on the role of botanical garden as a taxonomic aid.

14. What is Photophosphorylation ? Describe non-cyclic photophosphorylation in detail.

Or

Who discovered the citric acid cycle ? Explain its major steps.