

Tamilnadu Board Class 12 Botany Sample Paper 2

Higher Secondary Second Year

BOTANY

Model Question Paper – 2

Time : 2.30 hours

Marks: 70

Section – I

15x1=15

Answer all the questions:-

1. Mounted herbarium specimens are sprayed with fungicide

- | | |
|----------------------|----------------------|
| a) Zinc sulphate | b) Mercuric sulphate |
| c) Mercuric chloride | d) Zinc chloride |

2. Which plant is called madder plant?

- | | |
|--------------------|-------------------------|
| a) Coffea arabica | b) Cinchona officinalis |
| c) Rubia tinctoria | d) Morrinda tinctoria |

3. Lateral roots originate from

- | | |
|---------------|--------------|
| a) Epidermis | b) Cortex |
| c) Endodermis | d) Pericycle |

4. Lenticels are lens shaped openings seen in

- | | |
|--------------|------------|
| a) Epidermis | b) Cortex |
| c) Cork | d) Cambium |

5. The term chromosome was introduced by

- | | |
|-------------|-------------|
| a) Bridges | b) Waldeyer |
| c) Balbiani | d) Flemming |

6. The following codons are called nonsense codons

- | | |
|------------------|------------------|
| a) UUA, UCA, UGU | b) UCC, ACU, CCU |
| c) UAA, UAG, UGA | d) ACU, CCC, GUC |

7. The ability of callus to develop into shoot or root is

- a) De-differentiation b) Differentiation
c) Re-differentiation d) Totipotency

8. The joining of DNA fragments of vector and donor is
a) Fusion b) Cloning
c) Splicing d) Molecular scissor

9. One of the following organisms is SCP(Single Cell Protein)
a) Nostoc b) Rhizobium
c) Agaricus d) Spirulina

10. The active Enzyme in alkaline medium is
a) Diastase b) Pepsin
c) Tripsin d) Zymase

11. The essential component for the formation of chlorophyll
a) Mg b) Fe
c) Cl d) Mn

12. Removal of water molecule from the substrate is called
a) Reduction b) Oxidation
c) Enolation d) Phosphorylation

13. Synthetic auxin used to eradicate weeds is
a) PAA b) IAA
c) 2, 4-D d) NAA

14. Binomial name of vilvum
a) Acalypha indica b) Aegle marmelos
c) Cissus quadrangularis d) Mimosa pudica

15. Leaves of the following plant is used instead of tea
a) Cola nitida b) Ilex paragurensis
c) Cephalis d) Vinca rosea

Section – II

6x2=12

Answer any six of the following. Question No.22 is compulsory:-

16. Write a note on the inflorescence of *Cocos nucifera*.
17. What is tyloses?
18. Write a note on the functions of epidermal tissue system.
19. Write about the uses of gene mapping.
20. Name the fibre yielding plants of Malvaceae.
21. Write a note on uses of SCP.
22. Differentiate photo respiration from dark respiration
23. Write a note on phytochromes and flowering.
24. What is heterosis?

Section – III

6x3=18

Answer any six of the following. Question No.27 is compulsory:-

25. Write a note on significance of herbarium.
26. Differentiate heartwood from sapwood.
27. Draw the structure of t-RNA
28. Draw the structure of open vascular bundle.
29. Write a note on economic importance of musaceae
30. Explain the concept of tissue culture.
31. Explain significance of Pentose phosphate pathway.
32. Write a note on the physiological effects of gibberellin.
33. Write the economic importance of rice

Section – IV

5x5=25

Answer all the following:-

34. Explain the salient features of ICBN

(Or)

Draw and label T.S of Monocot root

35. Explain *Ixora coccinea* in technical terms

(Or)

Differentiate dicot stem from Monocot stem.

36. Write a short note on mutagenic agents.

(Or)

Explain C4 cycle (explanation (Or) flow chart)

37. Write an essay on recombinant DNA technology

(Or)

Differentiate cyclic from non-cyclic photo phosphorylation.

38. Write a note on physiological effects of auxin and cytokinin.

(Or)

What is the role of BT-toxin in crop protection against pest? Explain the action of biopesticide.

