

**MAYILADUTHURAI DISTRICT  
SECOND REVISION TEST, FEBRUARY - 2023**

**Standard - XII**

**BOTANY**

**TIME: 3:00 hrs**

**Marks: 70**

**I. Answer all the questions:**

**15 x1 = 15**

1. Transmitting tissue is found in
  - a) Micropylar region of ovule
  - b) Pollen tube wall
  - c) Stylar region of gynoecium
  - d) Integument
2. In a test cross involving F1 dihybrid flies, more parental type offspring were produced than the recombination type offspring. This indicates
  - a) The two genes are located on two different chromosomes
  - b) Chromosomes failed to separate during meiosis
  - c) The two genes are linked and present on the same chromosome
  - d) Both of the characters are controlled by more than one gene
3. Changing the codon AGC to AGA represents
  - a) missense mutation
  - b) nonsense mutation
  - c) frameshift mutation
  - d) deletion mutation
4. Which of the following one is used as a Biosensors?
  - a. Electrophoresis
  - b. Bioreactors
  - c. Vectors
  - d. Electroporation
5. Cryopreservation means it is a process to preserve plant cells, tissues or organs
  - a) at very low temperature by using ether.
  - b) at very high temperature by using liquid nitrogen
  - c) at very low temperature of -196 by using liquid nitrogen
  - d) at very low temperature by using liquid nitrogen
6. Pedogenesis refers to -----
  - a) Fossils
  - b) Water
  - c) Population
  - d) Soil
7. Pond ecosystem is -----
  - a) not self sufficient and self regulating
  - b) partially self sufficient and self regulating
  - c) self sufficient and not self regulating
  - d) self sufficient and self regulating
8. The unit for measuring ozone thickness-----
  - a) Joule
  - b) Kilos
  - c) Dobson
  - d) Watt
9. Dwarfing gene of wheat is -----
  - a) pal 1
  - b) Atomita 1
  - c) Norin 10
  - d) pelita 2
10. The active principle trans-tetra hydro cannabinol is present in -----
  - a) Opium
  - b) Curcuma
  - c) Marijuana
  - d) Andrographis
11. Codon – anticodon interactions occur by -----
  - a) Covalent bond
  - b) Electrostatic interactions
  - c) Hydrogen bonds
  - d) Hydrophobic interaction
12. Observe the following statements and pick out the right option from the following  
Statement I – Perfumes are manufactured from essential oils. Statement II – Essential oils are formed at different parts of the plants.
  - a) Statement I is correct
  - b) Statement II is correct
  - c) Both statements are correct
  - d) Both statements are wrong
13. Which of the following is incorrectly paired?
  - a) Wheat - Himgiri
  - b) Milch breed - Sahiwal
  - c) Rice - Ratna
  - d) Pusa Komal - Brassica.
14. Transmitting tissue is found in -----
  - a) Micropylar region of ovule
  - b) Pollen tube wall
  - c) Stylar region of gynoecium
  - d) Integument
15. Which of the following explains how progeny can possess the combinations of traits that none of the parent possessed?
  - a) Law of segregation
  - b) Chromosome theory
  - c) Law of independent assortment
  - d) Polygenic inheritance

**II. Answer any Six questions:**

**6X2=12**

**(Question no: 23 is compulsory)**

16. Define the term Diplospory.
17. Explain the law of dominance in monohybrid cross.
18. What is TATA box?
19. What is bioremediation?
20. What do you mean Embryoids?
21. What are ecological equivalents? Give one example .
22. How do sacred groves help in the conservation of biodiversity?
23. Differentiate primary introduction from secondary introduction.
24. What will you do if you want to make a portable indoor greenery?

**III. Answer any three questions:**

**6X3=18**

**(Question no: 30 is compulsory)**

25. Write short note on Pollen kitt.
26. Differentiate continuous variation with discontinuous variation
27. Write the salient features of Sutton and Boveri concept.
28. What do you know about the word pBR332?
29. write the Secondary metabolites and its plant resources by using cell suspension culture
30. What is thermal stratification? Mention their types.
31. What will happen if all producers are removed from ecosystem?
32. If a person drinks a cup of coffee daily it will help him for his health. Is this correct?  
If it is correct, list out the benefits.
33. Define Photosynthetically Active Radiation.

**IV. Answer all questions in detail.**

**5X5=25**

34. Discuss the steps involved in Microsporogenesis.  
(or)  
Describe dominant epistasis with an example.
35. Describe the molecular mechanism of RNA modification.  
(or)  
Mention the application of Biotechnology.
36. Explain different steps in Protoplast Culture.  
(or)  
What is soil profile? Explain the characters of different soil horizons
37. Various stages of succession are given bellow. From that rearrange them accordingly.  
Find out the type of succession and explain in detail. Reed-swamp stage, phytoplankton stage, shrub stage, submerged plant stage, forest stage, submerged free floating stage, marsh meadow stage.  
(or)  
What are the effects of deforestation and benefits of agroforestry?
38. List out the new breeding techniques involved in developing new traits in plant breeding.  
(or)

What are the King and Queen of spices? Explain about them and their uses.