



**MALAR TRUST INDIA – EACHAMPALLAM (CHENGALPATTU DIST.,)
BIOLOGY QUESTION BANK by Mr.S. AJITH KUMAR**

BIOLOGY-BOTANY:

UNIT-1:

1. Differentiate Grafting and Layering
2. "Tissue culture is the best method for propagating rare and endangered plant species"- Discuss.
3. What is Cantharophily
4. What is endothelium.
5. Define the term Diplospory.
6. List out the functions of tapetum.
7. "Endothecium is associated with dehiscence of anther" Justify the statement.
8. What is Mellitophily?
9. Write short note on Heterostyly.
10. Discuss the steps involved in Microsporogenesis
11. With a suitable diagram explain the structure of an ovule.
12. What is endosperm. Explain the types.
13. Differentiate the structure of Dicot and Monocot seed.
14. Give a detailed account on parthenocarpy. Add a note on its significance.

UNIT-2:

1. What is back cross?
2. What are multiple alleles
3. Explain the law of dominance in monohybrid cross.
4. Differentiate incomplete dominance and codominance.
5. What is meant by cytoplasmic inheritance Differentiate continuous variation with discontinuous variation

UNIT-3:

1. What is the difference between missense and nonsense mutation?
2. Explain the mechanism of crossing over.

3. Write the salient features of Sutton and Boveri concept.
4. What is gene mapping? Write its uses.
5. Write the steps involved in molecular mechanism of DNA recombination with diagram.
6. Mention the name of man-made cereal. How it is formed?
7. How sex is determined in monoecious plants. write their genes involved in it.
8. Draw the diagram of different types of aneuploidy.

UNIT-4:

1. Name the chemicals used in gene transfer.
2. What do you know about the word pBR332?
3. Mention the application of Biotechnology.
4. What are restriction enzyme. Mention their type with role in Biotechnology
5. Compare the various types of Blotting techniques.
6. Write the advantages and disadvantages of Bt cotton.
7. What is bioremediation? give some examples of bioremediation.
8. Write the benefits and risk of Genetically Modified Foods.
9. How will you identify a vectors?

UNIT-5:

1. What do you mean Embryoids? Write its application.
2. Explain the basic concepts involved in plant tissue culture.
3. Give an account on Cryopreservation.
4. What do you know about Germplasm conservation. Describe it.
5. Write the protocol for artificial seed preparation.



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UNIT-6:

1. What is Phytoremediation ?
2. Soil formation can be initiated by biological organisms. Explain how?
3. Distinguish habitat and niche
4. What is mutualism? Mention any two example where the organisms involved are commercially exploited in modern agriculture.
5. What is vivipary? Name a plant group which exhibits vivipary.
6. What is thermal stratification? Mention their types
7. What is seed ball?
8. What is co evolution?
9. How is anemochory differ from zoochory?
10. List out the effects of fire to plants.
11. Explain different types of hydrophytes with examples.
12. What are the advantages of seed dispersal?
13. Enumerate the anatomical adaptations of xerophytes.
14. List out any five morphological adaptations of halophytes.
15. Describe dispersal of fruit and seeds by animals.

UNIT-7:

1. Pyramid of energy is always upright. Give reasons
2. Construct the food chain with the following data. Hawk, plants, frog, snake, grasshopper
3. Draw a pyramid from following details and explain in brief. Quantities of organisms are given-Hawks-50, plants-1000.rabbit and mouse-250 +250, pythons and lizard- 100 + 50 respectively.
4. 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, submerge

5. What will happen if all producers are removed from ecosystem?

UNIT-8:

1. What is ozone hole?
2. Expand CCS.
3. Suggest a solution to water crisis and explain its advantages.
4. Explain afforestation with case studies.
5. What are the effects of deforestation and benefits of agro forestry?

UNIT-9:

1. Differentiate primary introduction from secondary introduction.
2. What are the different types of hybridization?
3. Write a note on heterosis.
4. List out the new breeding techniques involved in developing new traits in plant breeding.

UNIT-10:

1. What is pseudo cereal? Give an example.
2. Give definitions for organic farming?
3. Which is called as the “King of Bitters”? Mention their medicinal importance.
4. Differentiate bio-medicines and botanical medicines
5. What is TSM? How does it classified and what does it focuses on?
6. Write the economic importance of rice.
7. Write the advantage and disadvantage of Golden Rice.
8. What are the King and Queen of spices? Explain about them and their uses.
9. Enumerate the uses of turmeric.
10. What are millets? What are its types? Give example for each type.