

| SUBJECT | MARKS | QUESTIONS | YEARS |
|---------|-------|--|------------|
| BIO-BOT | 2 | Define Cybrid. | MAR-20 |
| BIO-BOT | 2 | Write any four uses of Seedball. | MAR-20 |
| BIO-BOT | 2 | What are the objectives of clean development mechanism ? | MAR-20 |
| BIO-BOT | 2 | Define - Organic farming. | MAR-20 |
| BIO-BOT | 2 | Write the Botanical name and family of Nilavembu. Write any one of its uses. | MAR-20 |
| BIO-BOT | 2 | Name the enzymes involved in genetic engineering. | MAR-20 |
| BIO-BOT | 2 | Draw and mark the parts of first cell of male gametophyte. | SEP-20 |
| BIO-BOT | 2 | Write short notes on Sonara 64. | SEP-20 |
| BIO-BOT | 2 | What are embryoids ? | SEP-20 |
| BIO-BOT | 2 | What is Leaching? | SEP-20 |
| BIO-BOT | 2 | Define Heterosis. | SEP-20 |
| BIO-BOT | 2 | What will happen when Rhizobium bacteria is applied to the soil ? | SEP-20 |
| BIO-BOT | 2 | Define Multiple alleles | AUG-21 |
| BIO-BOT | 2 | Name the chemicals used in gene transfer. | AUG-21 |
| BIO-BOT | 2 | What is Co-evolution ? | AUG-21 |
| BIO-BOT | 2 | Pyramid of energy is always upright. Give reasons. | AUG-21 |
| BIO-BOT | 2 | Differentiate primary introduction from secondary introduction. | AUG-21 |
| BIO-BOT | 2 | Name the humors that are responsible for the health of human beings. | AUG-21 |
| BIO-BOT | 2 | What is Mellitophily ? | MAY-22 |
| BIO-BOT | 2 | What are the enzymes you can use to cut terminal end and internal phosphodiester bond of nucleotide sequence ? | MAY-22 |
| BIO-BOT | 2 | What is myrmecophily ? | MAY-22 |
| BIO-BOT | 2 | Draw a pyramid from following details and name the type of pyramid. Quantities of organisms are given Hawks-50, Plants-1000, Rabbit and Mouse 250+250. Pythons and Lizard 100+50 respectively. | MAY-22 |
| BIO-BOT | 2 | How are microbial inoculants used to increase the soil fertility ? | MAY-22 |
| BIO-BOT | 2 | Give definitions for organic farming. | MAY-22 |
| BIO-BOT | 2 | Give the types of synopsis. | JUL-22 |
| BIO-BOT | 2 | What is C-value ? | JUL-22 |
| BIO-BOT | 2 | Differentiate Biotope and Ecotope. | JUL-22 |
| BIO-BOT | 2 | What is PAR ? | JUL-22 |
| BIO-BOT | 2 | What is SLF ? | JUL-22 |
| BIO-BOT | 2 | What is Bio-pest repellent ? | JUL-22 |
| BIO-BOT | 2 | The endosperm of angiosperm is different from gymnosperm. Do you agree? Justify your answer. | DEPT-MODEL |
| BIO-BOT | 2 | Who are rediscovered Mendel's experiment works? | DEPT-MODEL |
| BIO-BOT | 2 | Multiple Alleles – Define. | DEPT-MODEL |
| BIO-BOT | 2 | Differentiate somatoclonal variation, gametic clonal variation. | DEPT-MODEL |
| BIO-BOT | 2 | What is called phytoremediation? | DEPT-MODEL |
| BIO-BOT | 2 | What is ozone hole? | DEPT-MODEL |

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| BIO-BOT | 3 | In 4 o'clock plant Pale green leaved plant(Male) X Dark green leaved plant(Female). Explain the type of inheritance. | MAR-20 |
| BIO-BOT | 3 | What is PBR 322 plasmid ? | MAR-20 |
| BIO-BOT | 3 | What is Green House Effect ? Draw the relative contributions of green house gases. | MAR-20 |
| BIO-BOT | 3 | Give an account on cryo preservation. | MAR-20 |
| BIO-BOT | 3 | Write the three differences between Habitat and Niche. | MAR-20 |
| BIO-BOT | 3 | Write any three practical applications of polyembryony. | SEP-20 |
| BIO-BOT | 3 | How are artificial seeds produced ? | SEP-20 |
| BIO-BOT | 3 | Write the uses of silvopasture system. | SEP-20 |
| BIO-BOT | 3 | Differentiate Autotrophic components from Heterotrophic components. | SEP-20 |
| BIO-BOT | 3 | Mention the name of man-made cereal. How it is formed ? | AUG-21 |
| BIO-BOT | 3 | What are the materials used to grow microorganism like Spirulina ? | AUG-21 |
| BIO-BOT | 3 | Differentiate cladode from phyllode with example. | AUG-21 |
| BIO-BOT | 3 | Give four examples of plants cultivated in commercial agroforestry. | AUG-21 |
| BIO-BOT | 3 | Draw the diagrammatic structure of ovule and label its parts. | AUG-21 |
| BIO-BOT | 3 | List out the functions of tapetum. | MAY-22 |
| BIO-BOT | 3 | What is the difference between missense and nonsense mutation ? | MAY-22 |
| BIO-BOT | 3 | What do you know about the word pBR 322 ? | MAY-22 |
| BIO-BOT | 3 | What is CCS ? | MAY-22 |
| BIO-BOT | 3 | Distinguish habitat and niche. | MAY-22 |
| BIO-BOT | 3 | Draw and explain Hemianatropous Ovule with an example. | JUL-22 |
| BIO-BOT | 3 | Give the significance of ploidy. | JUL-22 |
| BIO-BOT | 3 | What is bio-remediation ? Give an example. | JUL-22 |
| BIO-BOT | 3 | Draw and explain the thermal stratification of a pond. | JUL-22 |
| BIO-BOT | 3 | What is Green house effect ? What are the gases involved in it ? | JUL-22 |
| BIO-BOT | 3 | Differentiate continuous variation with discontinuous variations. | DEPT-MODEL |
| BIO-BOT | 3 | What is gene mapping? Mention its uses. | DEPT-MODEL |
| BIO-BOT | 3 | Lichen is considered as a good example of an obligate mutualism. Explain. | DEPT-MODEL |
| BIO-BOT | 3 | Draw a pyramid from the following details and explain. The quantities of organisms are given. Hawks- 25 and plants - 500 rabbit and mouse - 125 + 125, snake and lizard - 50 + 25 respectively. | DEPT-MODEL |
| BIO-BOT | 3 | What do you know about the objectives of plant breeding? | DEPT-MODEL |

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| BIO-BOT | 5 | Explain the different mode of entry of pollen tube into the ovule. | MAR-20 |
| BIO-BOT | 5 | What is gene mapping and write its uses. | MAR-20 |
| BIO-BOT | 5 | How to protect the ecosystem? | MAR-20 |
| BIO-BOT | 5 | Ramu and Somu are farmers. Ramu cultivated the crops by self fertilization method. Somu cultivated the crops from mixed population. (i) Who will get new variety? (ii) Write the advantages and disadvantages of their selection. | MAR-20 |
| BIO-BOT | 5 | Explain Intergenic Interaction with an example. | SEP-20 |
| BIO-BOT | 5 | List out any five applications of Biotechnology. | SEP-20 |
| BIO-BOT | 5 | Water is essential for life. State the reason. Write any four features for plants which enable them to survive in water scarcity environment. | SEP-20 |
| BIO-BOT | 5 | (i) Write the botanical name of State Tree of Tamil Nadu. (ii) From where it is originated? (iii) Write its three uses. | SEP-20 |
| BIO-BOT | 5 | Discuss the steps involved in Microsporogenesis. | AUG-21 |
| BIO-BOT | 5 | Describe dominant epistasis with an example. | AUG-21 |
| BIO-BOT | 5 | Explain the basic concepts involved in plant tissue culture. | AUG-21 |
| BIO-BOT | 5 | Explain the types of succession. | AUG-21 |
| BIO-BOT | 5 | Give a detailed account on parthenocarpy, add a note on its significance. | MAY-22 |
| BIO-BOT | 5 | Differentiate incomplete dominance and co-dominance. | MAY-22 |
| BIO-BOT | 5 | Write the applications of plant tissue culture. | MAY-22 |
| BIO-BOT | 5 | What are the King and Queen of spices? Write their uses. | MAY-22 |
| BIO-BOT | 5 | Give the characteristic features of Anemophilous plants. | JULY-22 |
| BIO-BOT | 5 | Explain the incomplete dominance with example. | JULY-22 |
| BIO-BOT | 5 | Explain the food web with an example. Give its significance. | JULY-22 |
| BIO-BOT | 5 | What are Artificial Seeds? Give the advantages of Artificial Seeds. | JULY-22 |
| BIO-BOT | 5 | With a suitable diagram explain the structure of an ovule. | DEPT-MODEL |
| BIO-BOT | 5 | What is single cell protein? Mention its application. | DEPT-MODEL |
| BIO-BOT | 5 | Suggest a solution to water crises and explain its advantages. | DEPT-MODEL |
| BIO-BOT | 5 | What are millets? What are its types? Give example for each type. | DEPT-MODEL |

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| BIO-ZOO | 2 | What is Ovulation? In which day of menstrual cycle it takes place? | MAR-20 |
| BIO-ZOO | 2 | Write the cause of Down's Syndrome. | MAR-20 |
| BIO-ZOO | 2 | What are operons? How many operon groups are present in E. coli? | MAR-20 |
| BIO-ZOO | 2 | Write any two differences between active and passive immunity. | MAR-20 |
| BIO-ZOO | 2 | Which is referred to as industrial alcohol? Why? | MAR-20 |
| BIO-ZOO | 2 | What is the most important application of human stem cells? | MAR-20 |
| BIO-ZOO | 2 | Draw and label the parts of human sperm cell | SEP-20 |
| BIO-ZOO | 2 | Define - Transcription | SEP-20 |
| BIO-ZOO | 2 | What are vestigial organs? Give example. | SEP-20 |
| BIO-ZOO | 2 | Name some microbes used in the production of household food products. | SEP-20 |
| BIO-ZOO | 2 | Define Endemism | SEP-20 |
| BIO-ZOO | 2 | In many parts of Chennai, number of doves increases rather than crows. What type of habitat loss is it? Define. | SEP-20 |
| BIO-ZOO | 2 | What is Parthenogenesis? | AUG-21 |
| BIO-ZOO | 2 | What are amniocentesis? | AUG-21 |
| BIO-ZOO | 2 | Write the central dogma of protein synthesis. | AUG-21 |
| BIO-ZOO | 2 | What is vaccine? | AUG-21 |
| BIO-ZOO | 2 | What is co-extinction? | AUG-21 |
| BIO-ZOO | 2 | What is referred to as bio-magnification? | AUG-21 |
| BIO-ZOO | 2 | What is Parthenogenesis? Give example. | MAY-22 |
| BIO-ZOO | 2 | What is Surrogacy? | MAY-22 |
| BIO-ZOO | 2 | Differentiate template strand from coding strand. | MAY-22 |
| BIO-ZOO | 2 | Who disproved Lamarck's theory of acquired characters? How? | MAY-22 |
| BIO-ZOO | 2 | Write the symptoms of Filariasis. | MAY-22 |
| BIO-ZOO | 2 | What does gene therapy mean? | MAY-22 |
| BIO-ZOO | 2 | Define gametogenesis. | JUL-22 |
| BIO-ZOO | 2 | Differentiate foeticide from infanticide. | JUL-22 |
| BIO-ZOO | 2 | What is a genetic code? | JUL-22 |
| BIO-ZOO | 2 | Define the term super bug? | JUL-22 |
| BIO-ZOO | 2 | Differentiate between somatic cell gene therapy and germline gene therapy. | JUL-22 |
| BIO-ZOO | 2 | Differentiate Natality from Mortality. | JUL-22 |
| BIO-ZOO | 2 | Describe the structure of the head of a human sperm. | DEPT-MODEL |
| BIO-ZOO | 2 | Mention any four salient features of human genome project. | DEPT-MODEL |
| BIO-ZOO | 2 | Name an opioid drug and its plant source. How does the drug affect human body? | DEPT-MODEL |
| BIO-ZOO | 2 | How does the transgenic cow Rosie's milk differ from normal cow's milk? | DEPT-MODEL |
| BIO-ZOO | 2 | Differentiate natality from mortality. | DEPT-MODEL |
| BIO-ZOO | 2 | What is ozone depletion? How is it caused? | DEPT-MODEL |

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| BIO-ZOO | 3 | What is known as "Let-Down" reflex? | MAR-20 |
| BIO-ZOO | 3 | Write a note on " Amniocentesis". | MAR-20 |
| BIO-ZOO | 3 | Name the hormone secreted by Thymus gland and mention two functions of that hormone. | MAR-20 |
| BIO-ZOO | 3 | Write about gene banks. | MAR-20 |
| BIO-ZOO | 3 | A character present in grandfather goes to grand son through daughter. Draw flowchart for this pattern of inheritance. | MAR-20 |
| BIO-ZOO | 3 | What is Ectopic Pregnancy? Write its consequence. | SEP-20 |
| BIO-ZOO | 3 | What is meant by Surrogacy? | SEP-20 |
| BIO-ZOO | 3 | Write the Lamark's theory of inheritance of aquired characters. | SEP-20 |
| BIO-ZOO | 3 | Yeast is more suitable for production of recombinant interferons than E.coli. Give reason. | SEP-20 |
| BIO-ZOO | 3 | List out intrinsic factor and Extrinsic factors in population regulation. | SEP-20 |
| BIO-ZOO | 3 | Write the salient features of mutation theory. | AUG-21 |
| BIO-ZOO | 3 | Write short notes on microbial fuel cell. | AUG-21 |
| BIO-ZOO | 3 | Differentiate somatic cell gene therapy from germ line gene therapy. | AUG-21 |
| BIO-ZOO | 3 | List out any five causes of biodiversity loss. | AUG-21 |
| BIO-ZOO | 3 | If a marriage occurs between normal man(XH Y-) and heterozygous hamophilic woman (XH Xh), what would be the result of F1 and F2 ? Draw flow chart. | AUG-21 |
| BIO-ZOO | 3 | Differentiate foeticide from infanticide. | MAY-22 |
| BIO-ZOO | 3 | Autoimmune disease is a misdirected immunity response. Justify. | MAY-22 |
| BIO-ZOO | 3 | When does antibiotic resistance develop? | MAY-22 |
| BIO-ZOO | 3 | Differentiate Natality from Mortality. | MAY-22 |
| BIO-ZOO | 3 | In the XY chromosomal system of sex determination, males have only one 'X' chromosome, Whereas females have two. How does the organism compensate for this dosage differences between the sexes? | MAY-22 |
| BIO-ZOO | 3 | Draw a neat labelled diagram of Human sperm cell | JUL-22 |
| BIO-ZOO | 3 | What is Bioremediation? Name any one microorganism involved in Bioremediation. | JUL-22 |
| BIO-ZOO | 3 | What is pedogenesis? Mention any two of its function. | JUL-22 |
| BIO-ZOO | 3 | State the theory of spontaneous generation. | JUL-22 |
| BIO-ZOO | 3 | Classify the pollutants. | JUL-22 |
| BIO-ZOO | 3 | Explain multiple fission in Plasmodium with a diagram. | DEPT-MODEL |
| BIO-ZOO | 3 | Write the causes and the differences between Haemophilia and Thalassemia. | DEPT-MODEL |
| BIO-ZOO | 3 | Explain the secondary treatment of waste water. | DEPT-MODEL |
| BIO-ZOO | 3 | Explain the steps involved in the preparation of human insulin artificially. | DEPT-MODEL |
| BIO-ZOO | 3 | Differentiate in-situ and ex-situ conservation by sighting examples for each. | DEPT-MODEL |

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| BIO-ZOO | 5 | Write about methodologies of HGP. | MAR-20 |
| BIO-ZOO | 5 | Explain the evolutionary path of man. | MAR-20 |
| BIO-ZOO | 5 | Write short notes on i) Population Density ii) Natality and Mortality | MAR-20 |
| BIO-ZOO | 5 | Write about the effects of chemicals used in the field of Agriculture. | MAR-20 |
| BIO-ZOO | 5 | What are Multiple alleles? Describe their inheritance in human with example. | SEP-20 |
| BIO-ZOO | 5 | The relationship between genes and DNA are best understood by mutation studies. Justify this statement. | SEP-20 |
| BIO-ZOO | 5 | If immunological surveillance is effective, cancer should not occur. Justify. | SEP-20 |
| BIO-ZOO | 5 | We are polluting water resources. What will be the consequences of water pollution on organisms? | SEP-20 |
| BIO-ZOO | 5 | Explain the process of fertilization and prevention of polyspermy in human. | AUG-21 |
| BIO-ZOO | 5 | Explain the classical model of Lac Operon, Proposed by Jacob and Monod. | AUG-21 |
| BIO-ZOO | 5 | Explain the structure of immunoglobulin with suitable diagram | AUG-21 |
| BIO-ZOO | 5 | Give an account of the properties of soil. | AUG-21 |
| BIO-ZOO | 5 | Explain the structure of Human Ovum with a neat labelled diagram. | MAY-22 |
| BIO-ZOO | 5 | Write the salient features of Human Genome Project. | MAY-22 |
| BIO-ZOO | 5 | Explain the structure of immunoglobulin with suitable diagram. | MAY-22 |
| BIO-ZOO | 5 | write an essay on radioactive waste management. | MAY-22 |
| BIO-ZOO | 5 | What is karyotyping? Write the application of karyotyping. | JUL-22 |
| BIO-ZOO | 5 | What are called medical wastes? Write a note on its management and the methods of disposal. | JUL-22 |
| BIO-ZOO | 5 | Write the goals of Human Genome Project (HGP). | JUL-22 |
| BIO-ZOO | 5 | What is a vaccine? Explain its types. | JUL-22 |
| BIO-ZOO | 5 | Explain any five techniques of Assisted Reproductive Technology (ART). | DEPT-MODEL |
| BIO-ZOO | 5 | i) Differentiate divergent and convergent evolution with examples. ii) What are the various objections to Darwinism? | DEPT-MODEL |
| BIO-ZOO | 5 | Explain the life cycle of Plasmodium. | DEPT-MODEL |
| BIO-ZOO | 5 | Mention the resource for the richness of biodiversity in the tropics. | DEPT-MODEL |