



## **BIOLOGY**

# **BOOKS - FULL MARKS BIOLOGY (TAMIL ENGLISH)**

## **SAMPLE PAPER 13 (UNSOLVED)**

### **Bio Botany Part I**

1. The most common type of ovule noticed in dicots and monocots is .....

A. a) Orthotropus

B. b) Anatraopus

C. c) Campylotropus

D. d) Amphitropous

**Answer:**



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2. Among the following characters which one was not considered by Mendel in his experimentation pea ?

A. Speed - Tall or dwarf

B. Trichomal glandular or non-glandular

C. Seed - Green or yellow

D. Pod - Inflated or constricted

**Answer:**



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**3.** The point mutation sequence for transition, transition, transversion and transversion in DNA are

A. A to T, T to A, C to G and G to C

B. A to G, C to T, C to G and T to A

C. C to G, A to G, T to A and G to A

D. G to C, A to T, T to A and C to G

**Answer:**



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**4.** An antibiotic gene in a vector usually helps  
in the selection of

- A. Competent cells
- B. Transformed cells
- C. Recombinant cells
- D. None of the above

**Answer:**



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5. Which of the following ecosystem has the highest primary productivity?

A. Pond ecosystem

B. Lake ecosystem

C. Grassland ecosystem

D. Forest ecosystem

**Answer:**



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6. .... is the 100th Satellite launched to watch border surveillance.

A. GSAT-6A

B. SCAT SAT-I

C. INSAT 3DR

D. CARTOSAT-2

**Answer:**



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7. Which one of the following crop varieties correct matches with its resistance to a disease?



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8. The active principle trans tetra hydrocannabinol is present in

- A. Opium
- B. Curcuma
- C. Marijuana
- D. Andrographis

**Answer:**





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## Bio Botany Part Ii

1. Environmental determines the sex of equisetum - Justify.

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2. Difference between flush end and cohesive end of DNA.

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3. Mention the names of any two Tamil Nadu agricultural crops that was granted Geographical Indication (GI) tag recently.



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4. What is seed ball?



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



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6. Suggest few ways to overcome global warming.



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1. State the significance of sporopollenin.



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2. Define co-dominance. How it is proved by using *Gossypium* species?



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3. Comment on Biosafety.



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4. Explain the best suited type of breeding followed by plant breeders at present?



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5. Enumerate the uses of turmeric.



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1. (a) Explain the procedure of Southern Blotting Technique.

(b) List out the benefits of agroforestry.



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2. Explain the mechanism of crossing over.



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1. *Taenia solium* requires ..... as a secondary host to complete its life cycle.



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2. Mammalian egg is



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3. Enactment of ..... banned the identification of sex and to prevent the prenatal abortion.



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4. Haemophilia is more common in males because it is a



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5. The gene for the formation of factor VIII is located in.....



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6. Animals that can move from fresh water to sea called as .....



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7. Which of the following forests is known as the lungs of the planet earth?



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8. The use of microorganism metabolism to remove pollutants such as oil spills in the water bodies is known as



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## Biology Zoology Part ii

1. Complete the following cross between a carrier female for colour blindness with a normal male and write the genotype and

phenotype of progenies.

$$X^+ X^C \times X^+ Y^-$$



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2. Write the respective enzymes which are also called by the following names. (a) Kornberg enzyme (b) Ochoa's enzyme



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3. How does Mutation theory of Dev. Vries differ from Lamarck and Darwin's view in the origin of new species.



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4. Infective stage of *Entamoeba histolytica* \_\_\_\_



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5. Define the terms (a) Pedogenesis (b)

Phototaxis



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6. What is an endemic species? Give example.



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1. Give reasons for the following:

Some organisms like honey bees are called parthenogenetic animals.



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2. Hymen is not an indicator of women's virginity - Justify your answer.



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3. Write the causative agent, symptoms and incubation period of the sexually transmitted disease Syphilis.



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4. Write a brief note on (a) Cyclosporine A (b) Statins



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5. (i) Who discovered Interferons.

(ii) Mention the types of Interferons. (iii) Why yeast cells are preferred than E.coil cells for producing recombinant interferons.



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## Biology Zoology Part Iv

1. (a) Write in detail about the following Mendelian disorders (i) Thalassemia (ii)



# Albinism



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2. What is SMOG and how it is harmful for us?



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