



## BIOLOGY

# BOOKS - FULL MARKS BIOLOGY (TAMIL ENGLISH)

## SAMPLE PAPER 19 (UNSOLVED)

### Bio Botany Part I

1. Assertion : Sporopollenin preserves pollen in fossil deposits.

Reason : Sporopollenin is resistant to physical and biological decomposition

A. A is true , R is false

B. A is false , R is true

C. Both A and R are true

D. Both A and R are false

**Answer:**



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2. Which Mendelian idea is depicted by a cross in which  $F_1$  generation resembles both the parents.

- A. Incomplete dominance
- B. Law of dominance
- C. Inheritance of one gene
- D. Co-dominance

**Answer:**



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3. During which stage of meiosis does crossing over take place ?

- A. Leptotene stage of prophase I
- B. Zygotene stage of prophase I
- C. Diplotene stage of prophase I
- D. Pachytene stage of prophase I .

**Answer:**



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#### 4. Identify the incorrect statement?

A. Ti plasmid causes the bumpy top disease

B. Multiple cloning site is known as Polylinker

C. Non-viral method of transfection of Nucleic acid in cell

D. Polylactic acid is a kind of biodegradable and bioactive thermoplastic

**Answer:**



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5. The prevention of large scale loss of biological integrity is .....

A. a) Biopatent

B. b) Bioethics

C. c) Biosafety

D. d) Biofuel

**Answer:**



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**6.** Identify the possible link "A" in the following food chain

Plant → Insect → Frog → "A" → Eagle

A. King cobra

B. Gorilla

C. Rabbit

D. Tasmanian wolf

**Answer:**



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7. Which of the following would most likely help to slow down the greenhouse effect?

A. Converting tropical forests into grazing land for cattle.

B. Ensuring that all excess paper packaging is buried to ashes.



C. Redesigning landfill dumps to allow methane to be collected

D. Promoting the use of private rather than public transport

**Answer:**



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8. While studying the history of domestication of various cultivated plants were recognized earlier.

A. Centres of origin

B. Centres of domestication

C. Centres of hybrid

D. Centres of variation

**Answer:**



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**Bio Botany Part II**

1. What is layering ?



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2. Name any four chemical mutagens.



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3. How will you avoid the growing of microbes in nutrient medium during culture process?

What are the techniques used to remove the microbes?



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4. 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.



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5. How EIA is beneficial to a society?



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6. Name the bioactive principle and its medicinal value which is obtained from the plant - *Papaver somniferum*.



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1. How does the wrinkled gene make Mendel's peas wrinkled? Find out the molecular explanation.



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2. Explain the procedure behind the naming of Restriction Enzymes by citing an example.



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**3.** Rhytidome acts as a structural defence by plants against fire - Comment.



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**4.** What do you mean by Biochar? How it helps the environment?



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5. Write the botanical name and culinary uses of green gram.



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## Bio Botany Part Iv

1. (a) Give a detailed account on parthenocarpy. Add a note on its significance.



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2. (b) Enlist the strategies of eco system management?



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3. How Bt cotton crops are develop ?



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4. Draw a flow chart depicting the various kinds of Bio-diversity Conservation method.





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## Bio Zoology Part I

1. Transverse Binary fission is seen in \_\_\_\_

- A. Amoeba
- B. Planaria
- C. Ceratium
- D. Vorticella

**Answer:**



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2. The male sex hormone testosterone is secreted from

- A. Sertoli cells
- B. Leydig cells
- C. Epididymiss
- D. Prostate gland

**Answer:**



3. Which of the following is correct regarding HIV, hepatitis B, gonorrhoea and trichomoniasis?

A. Gonorrhoea is a STD whereas others are not.

B. Trichomoniasis is a viral disease whereas others are bacterial

C. HIV is a pathogen whereas others are diseases.

D. Hepatitis B is eradicated completely whereas others are not.

**Answer:**



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4. ZW-ZZ system of sex determination occurs in

A. Fishes

B. Reptiles

C. Birds

D. All of these

**Answer:**



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**5. Which of the following statements are true regarding DNA polymerase used in PCR ?**

- A. a) It is used to ligate introduced DNA in recipient cells
- B. b) It serves as a selectable marker
- C. c) It is isolated from a Virus
- D. d) It remains active at a high temperature

**Answer:**



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6. Organisms which can survive a wide range of temperature are called

- A. Ectotherms
- B. Eurytherms
- C. Endotherms
- D. Stenotherms

**Answer:**



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7. Wild ass is endemic to .....

- A. a) Western Ghats
- B. b) Deccan Peninsula
- C. c) Himalayas
- D. d) Indian desert

**Answer:**



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8. BOD stands for .....

A. a) Biological Oxidation Demand

B. b) Biotic Oxygen Deficient

C. c) Biological Oxygen Deficit

D. d) Biochemical Oxidation Deficit

**Answer:**



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**Bio Zoology Part II**

1. What are geological repositories ?



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2. At what stage of development are the gametes formed in new born male and female?



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3. Differentiate Intersexes from Supersexes.



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4. Mention any three similarities found common in Neanderthal man and Homo sapiens.



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5. What is the key difference between primary and secondary sewage treatment ?



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6. How J-shape differ from S-shape curve ?



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## Bio Zoology Part Iii

1. Describe the regeneration process noticed in living organism .



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2. Amniocentesis, the foetal sex determination test, is banned in our country, Is it necessary?

Comment.



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3. Why is the Human Genome Project called a mega project?



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4. What are DNA vaccines ?



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5. Explain (a) Cell Mediated Immunity (B)  
Antibody Mediated Immunity



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## Bio Zoology Part Iv

1. What is the significance of shape of regression in a species area relationship ?



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2. Discuss the genic balance mechanism of sex determination in *Drosophila* ?



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3. How the DNA is packed in an eukaryotic cell ?



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4. List the differences between R selected and K selected species.



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