



### 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:

**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:

**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:

4. Identify the incorrect statement?

- A. Ti plasmid causes the bunchy 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



A. a) Biopatent

B. b) Bioethics

C. c) Biosafety

D. d) Biofuel



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

 $\mathsf{Plant} \ \rightarrow \ \mathsf{Insect} \ \rightarrow \ \mathsf{Frog} \ \rightarrow \ \texttt{"A"} \ \rightarrow \ \mathsf{Eagle}$ 

A. King cobra

B. Gorilla

C. Rabbit

D. Tasmanian wolf



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

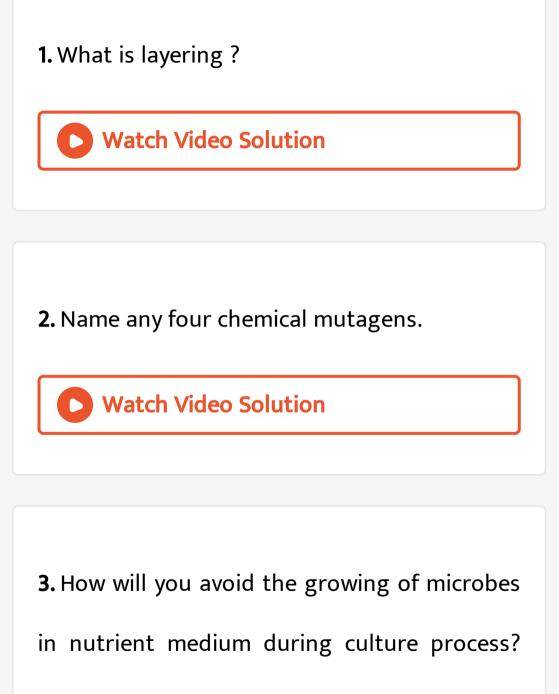
of various cultivated plants were recognized

earlier.

- A. Centres of origin
- B. Centres of domestication
- C. Centres of hybrid
- D. Centres of variation

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**Bio Botany Part li** 



What are the techniques used to remove the

microbes?



**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.



5. How EIA is beneficial to a society?



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

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**Bio Botany Part lii** 

 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.



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?

5. Write the botanical name and culinary uses

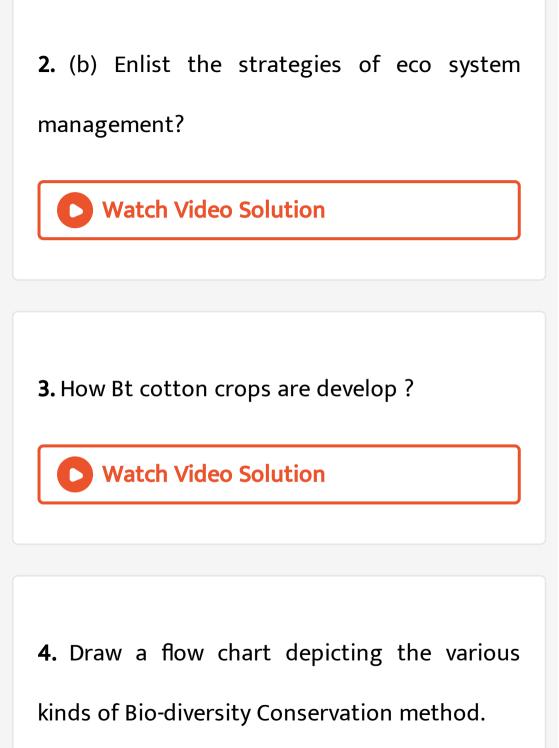
of green gram.

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**Bio Botany Part Iv** 

**1.** (a) Give a detailed account on

parthenocarpy. Add a note on its significance.





**Bio Zoology Part I** 

**1.** Trasnsvserse Binary fission is seen is\_\_\_\_

A. Amoeba

B. Planaria

C. Ceratium

D. Vorticella

Answer:



- The male sex hormone testosterone is secreted from
  - A. Sertoli cells
  - B. Leydig cells
  - C. Epididymiss
  - D. Prostate gland





**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 cradicated 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:**



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:

6. Oraganisms which can survive a wide rage of

temperature are called

A. Ectotherms

B. Eurytherms

C. Endotherms

D. Stenotherms

#### Answer:

A. a) Western Ghats

B. b) Deccan Peninsula

C. c) Himalayas

D. d) Indian desert

Answer:



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 ?



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



3. Differentiate Intersexes from Supersexes.



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

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5. What is the key difference between primary

and secondary sewage treatment?

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



**Bio Zoology Part Iii** 

1. Describe the regeneration process noticed

in living organism.

2. Ammiocentesis, the foetal sex determination

test, is banned in our country, Is it necessary?

Comment.

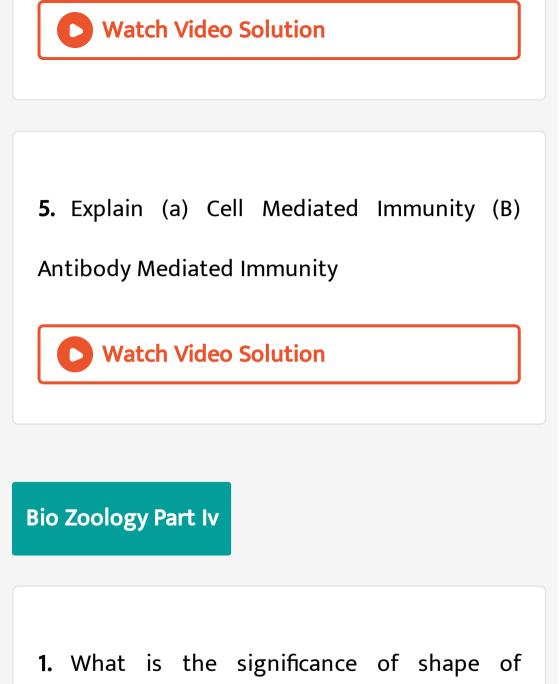
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3. Why is the Human Genome Project called a

mega project?

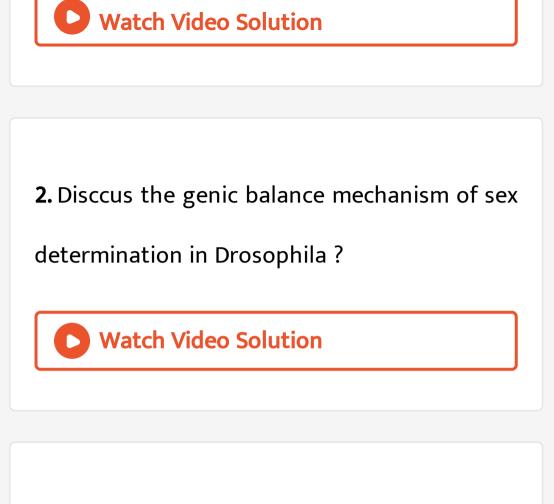
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4. What are DNA vaccines ?



regression in a species area relationship ?





3. How the DNA is packed in an eukaryotic cell

?



4. List the differences between R selected and

K selected species.

