



BIOLOGY

BOOKS - FULL MARKS BIOLOGY (TAMIL ENGLISH)

SAMPLE PAPER - 10

Bio Botany Part I

1. Choose the correct statement from the following

A. a) Gametes are involved in asexual reproduction

B. b) Bacteria reproduce asexually by budding

C. c) Conidia formation is a method of sexual reproduction

D. d) Yeast reproduce by budding

Answer: C



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2. The dominant epistasis ratio is

A. 9 : 3 : 3 : 1

B. 12 : 3 : 1

C. 9 : 3 : 4

D. 9 : 6 : 1

Answer: B



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3. The process of recombinant DNA technology

has the following steps

I. Amplification of the gene .

II. Insertion of recombinant DNA in to the host cells .

III. Cutting of DNA at specific location using restriction enzyme .

IV . Isolation of genetic meterial (DNA) Pick out the correct sequence of step for recombinant DNA technology .

A. ii, iii, iv and i

B. iv, ii, iii, and i

C. i, ii, iii, and iv

D. iv, iii, i, and ii

Answer: D



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4. A widely used fusogen in protoplast culture is

A. Polymethyl glycol

B. Polyethylene glycol

C. Polyethylene chloride

D. Polyvinyl chloride

Answer: B



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5. A specific place in an ecosystem, where an organism lives and performs its functions is

A. habitat

B. niche

C. landscape

D. biome

Answer: B



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6. Assertion (A) : Ozone acts as a natural sun block.

Reason (R) : UV rays reaching the earth are deviated from earth.

A. A is correct R is incorrect

B. A is incorrect R is correct

C. R explains A

D. Both A and R are incorrect

Answer: C



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7. Jaya and Ratna are the semi dwarf varieties
of

A. wheat

B. rice

C. cowpea

D. mustard

Answer: B



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8. Find out the correctly matched pair :

A. Rubber - Shorea robusta

B. Dye - *Lawsonia inermis*

C. Timber - *Cyperus papyrus*

D. Pulp - *Hevea brasiliensis*

Answer: B



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Bio Botany Part Ii

1. "Tissue culture is the best method for propagating rare and endangered plant

species". Discuss.



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2. Extranuclear inheritance is called as cytoplasmic inheritance. Why ?



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3. Differentiate Aneuploidy and Euploidy.



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4. How do you use the biotechnology in modern practice ?



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5. Classify plant tissue culture based on the explants used.



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6. What are ecological equivalents ? Give one example.



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Bio Botany Part Iii

1. Write a note on Replica plating technique of colony selection.



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2. List out the characteristics of ecological succession.



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3. How *Eichhornia crassiper* spoils the Indian ecosystem ?



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4. Write a short note on foxtail millet.





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5. Define the following terms.

(a) Emasculation (b) Bagging (c)

Biofortification



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Bio Botany Part Iv

1. (a) Enumerate the advantages of Artificial seeds.

(b) Write in detail about Autogenic succession and Allogenic succession.



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2. What are the objectives of Afforestation programme?



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1. In which mode of reproduction variations are seen

A. Asexual

B. Parthenogenesis

C. Sexual

D. Both a and b

Answer: C



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2. Father of a child is colourblind and mother is carrier for colourblindness, the probability of the child being colour blind is.

A. 25 %

B. 50 %

C. 100 %

D. 75 %

Answer: B



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3. Which of the following was the contribution of Hugo de Vries ?

A. Theory of mutation

B. Theory of natural Selection

C. Theory of inheritance of acquired characters

D. Germplasm theory

Answer: A



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4. The most common substrate used in distilleries for the production of ethanol is

A. Soyameal

B. Groundgram

C. Molasses

D. Corn meal

Answer: C



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5. Vaccines that use components of a pathogenic organism rather than the whole organism are called

A. attenuated recombinant vaccines

B. Subunit recombinant vaccines

C. DNA vaccines

D. conventional vaccines

Answer: B



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6. Match the following.

Contraceptives		Type
A. Multiload 375	(i)	Oral intake
B. Saheli	(ii)	mechanical
C. Tubectomy	(iii)	IUD
D. Valut	(iv)	Surgical

A. A-iii, B-i, C-iv, D-ii

B. A-iv, B-iii, C-i, D-ii

C. A-ii, B-iv, C-i, D-iii

D. A-iii, B-iv, C-ii, D-i

Answer: A



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7. Meselson and Stahl's experiment proved

.....

A. Transduction

B. Transformation

C. DNA is the genetic material

D. Semi - conservative of DNA replication

Answer: D



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8. The sporozoite of the material parasite is present in ___

A. saliva of infected female Anophels mosquito

B. RBC of human suffering from malari

C. Spleen of infected humans

D. Gut of female anopheles mosquito

Answer: A



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Bio Zoology Part Ii

1. Expand the acronyms (a) FSH (b) LH (c) hCG
(d) hPL



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2. What are STD's ? How are they transmitted ?



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3. Mention the symptoms of Down's syndrome.



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4. Name the chemical substance which is called by the name (a) Kornberg Enzyme (b) Ochoa's enzyme



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5. How does Neanderthal man differ from the modern man in appearance ?



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6. Distinguish between Epitope and Paratope.



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1. A person is infected by HIV. How will you diagnose for AIDS ?



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2. Explain in simple about the production process of industrial alcohol.



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3. How Edible vaccines are synthesized ?



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4. Describe J - shape and S - shape growth curves.



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5. 'Red data book' - What do you know about it ?



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1. During embryonic development some parts of the embryo differentiate into a set of membranes called extra embryonic membrane.
 - a. Name the extra embryonic membrane.
 - b. Mention its importance in the embryonic development.



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2. Explain the mode of sex determination in honeybees.



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