



BIOLOGY

BOOKS - FULL MARKS BIOLOGY (TAMIL ENGLISH)

SAMPLE PAPER -6 (SOLVED)

Bio Botany Part I

1. Choose the correct statement(s) about tenuinucellate ovule

A. Sporogenous cell is hypodermal

B. Ovules have fairly large nucellus

C. Sporogenous cell is epidermal

D. Ovules have single layer of nucellus
tissue

Answer: A



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2. The genotype of a plant showing the dominant phenotype can be determined by

A. Back cross

B. Test cross

C. Dihybrid cross

D. Pedigree analysis

Answer: B



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3. An allohexaploidy contains

- A. Six different genomes
- B. Six copies of three different genomes
- C. Two copies of three different genomes
- D. Six copies of one genome

Answer: B



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4. Match the following column I with column II

Column I	Column II
1. Exonuclease	a. add or remove phosphate
2. Endonuclease	b. binding the DNA fragments
3. Alkaline Phosphatase	c. cut the DNA at terminus
4. Ligase	d. cut the DNA at middle



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5. Assertion (A) : Incubation is followed by Inoculation.

Reason (R) : Explant is inoculated to media.

A. Both A and R are correct but R is not a correct explanation to A

B. R explains A

C. A is correct R is incorrect

D. Both A and R are incorrect

Answer: B



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6. Environment of any community is called

A. Paratope

B. Biotope

C. Ecotope

D. Epitope

Answer: B



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7. Which of the following is not a sedimentary cycle?

A. Nitrogen cycle

B. Phosphorus cycle

C. Sulphur cycle

D. Calcium cycle

Answer: A



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8. The plants which are grown in silvipasture system are

A. Sesbania and Acacia

B. Solanum and Crotolaria

C. Clitoria and Begonia

D. Teak and sandal

Answer: A



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Bio Botany Part II

1. What are multiple alleles? Give an example.



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2. Write the advantages of herbicide tolerant crops.



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3. Soil formation can be initiated by biological organisms. How?



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4. Where did Montreal Protocol was held?

State its objectives.



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5. What is Heterosis?



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6. Write the cosmetic uses of Aloe.



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Bio Botany Part Iii

1. List out the functions of tapetum.



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2. What do you mean by Embryoids? Write its application.



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3. Give a comparative account on Seaweed liquid fertilizer.



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4. Write a brief note on Detritus food chain.



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5. Mention the name of man-made cereal. How it is developed?





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Bio Botany Part Iv

1. (a) Describe the structure of a Cicer seed (dicot seed) with labelled diagram.



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2. (i) Explain the three types of hyperploidy.
(ii) List out the significance of ploidy.



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3. (i) Define tissue culture.

(ii) Explain the basic concepts involved in plant tissue culture.



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4. What is soil profile? Explain the characters of different soil horizons.



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1. Assertion (A): Asexual reproduction is called blastogenic reproduction.

Reason (R): It is accomplished by mitotic and meiotic divisions.

A. a) A and R are correct

B. b) A is correct but R is incorrect

C. c) Both A and R are incorrect

D. d) R is the correct explanation for A

Answer: B



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2. The mature sperms are stored in the

A. a) Seminiferous tubules

B. b) Vas deferens

C. c) Epididymis

D. d) Seminal vesicle

Answer: C



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3. A contraceptive pill prevents ovulation by

A. a) blocking fallopian tube

B. b) inhibiting the release of FSH and LH

C. c) stimulating the release of FSH and LH

D. d) causing immediate degeneration of
released ovum.

Answer: B



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4. Patau's syndrome is also referred to as

A. a) 13-Trisomy

B. b) 18-Trisomy

C. c) 21-Trisomy

D. d) None of these

Answer: A



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5. Cyclosporin - A is an immunosuppressive drug produced from

A. a) *Aspergillus niger*

B. b) *Manascus purpureus*

C. c) *Penicillium notatum*

D. d) *Trichoderma polysporum*

Answer: D



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6. PCR proceeds in three distinct steps governed by temperature, they are in order of

- A. a) Denaturation, Annealing, Synthesis
- B. b) Synthesis, Annealing, Denaturation
- C. c) Annealing, Synthesis, Denaturation
- D. d) Denaturation, Synthesis, Annealing

Answer: A



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7. Match column I with column II

Column I	Column II
(A) Mutualism	1. Lion and deer
(B) Commensalism	2. Round worm and man
(C) Parasitism	3. Birds compete with squirrels for nuts
(D) Competition	4. Sea anemone on hermit crab
(E) Predation	5. Barnacles attached to Whales

A. a) A-4, B-5, C-2, D-3, E - 1

B. b) A-3, B-1, C-4, D-2, E-5

C. c) A-2, B-3, C-1, D-5, E - 4

D. d) A - 5, B - 4, C-2, D-3, E - 1

Answer: A



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1. Total number of mega biodiversity countries in the world is

A. a) 12

B. b) 15

C. c) 17

D. d) 19

Answer: C



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Bio Zoology Part II

1. Why are the offsprings of oviparous animals are at a greater risk as compared to offsprings of viviparous organisms?



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2. What is "let-down reflex"?



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3. In E.coli, there enzymes galactosidase, permease and transacetylase are produced in the presence of lactose. Explain why the enzymes are not synthesized in the absence of lactose.



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4. Compare relative dating with absolute dating.



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5. List any five viral diseases , their casuative agents , site of infection , mode of transmission and symptoms



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6. Define the following terms.

(a) Eutrophication (b) Algal Bloom



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1. Write a short note on foetoscope.



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2. Under which condition does a microbe gains resistance against antibiotic?



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3. State Munch mass flow hypothesis.

Demonstrate the principle with neat diagram.



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4. Extinction of Dodo bird led to the danger of

Calvaria tree - Support your answer.



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5. Give examples of diseases which can be detected by PCR.



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Bio Zoology Part Iv

1. (a) Define the following terms with an example (i) Hologamy (ii) Isogamy (ii) Anisogamy (iv) Merogamy (v) Paedogamy



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2. Write a note on cervical cancer.



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3. (a) Point out the differences between active and passive immunity.



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4. How is the amplification of a gene sample of interest carried out using PCR ?



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