



BIOLOGY

BOOKS - FULL MARKS BIOLOGY (TAMIL ENGLISH)

SAMPLE PAPER - 15

Part I Choose The Correct Answer

1. Arrange the layers of anther wall from locus to periphery

A. Epidermis, middle layers, tapetum,
endothecium

B. Tapetum, middle layers, epidermis,
endothecium

C. Endothecium, epidermis, middle layers,
tapetum

D. Tapetum, middle layers
endothecium
epidermis

Answer: D



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2. Identify the autotriploid plant

A. Potato

B. Coffee

C. Ground nut

D. Apple

Answer: D



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3. 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: A



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4. Identify the true statements from the following:

- I. All ores are minerals
- II. All minerals are not ores.
- III. Aluminium can be extracted from bauxite.
- IV. Aluminium can be extracted from china clay.

A. ii and iii

B. I and iv

C. all the above

D. None of the above

Answer: D



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5. Read the given statements and select the correct option.

Statement A : Cattle do not graze on weeds of Calotropis.

Statement B : Calotropis have thorns and spines, as defense against herbivores.

A. Both the statements A and B are correct

B. Both the statements A and B are incorrect

C. Statements A and B are correct but statement B does not explain A

D. Statement A is correct, statement B is incorrect.

Answer: D



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6. Profundal zone is predominated by heterotrophs in a pond ecosystem, because of

A. with effective light penetration

B. no effective light penetration

C. complete absence of light

D. (a) and (b)

Answer: B



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7. The chemical properties of organic compounds are determined by certain groups called _____.

A. natural selection

B. hybridization

C. mutation

D. biofertilizers

Answer: B



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8. Wild ass is endemic to

A. Tropical African region

B. South India, Sri Lanka

C. South America, Greece

D. India alone

Answer: A



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9. A loose fold of skin around penis is known

as.....

A. funiculus

B. capsule

C. Prepuce

D. Isthmus

Answer: C



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10. In ZIFT technique, the zygote is transferred at the stage of.....

A. 16 blastomere

B. 21 blastomere

C. 12 blastomere

D. 8 blastomere

Answer: D



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11. Pick out odd man out.

A. Klinefelter's syndrome

B. Turner's syndrome

C. 13-Trisomy

D. Huntington's chorea

Answer: D



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12. Exo-erythrocytic schizogony of Plasmodium takes place in.....

A. RBC

B. Leucocytes

C. Stomach

D. Liver

Answer: D



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13. ELISA is mainly used for.....

A. Detection of mutations

B. Detection of pathogens

C. Selecting animals having desired traits

D. Selecting plants having desired traits

Answer: B



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14. Movement of organisms in response to light is called.....

A. Phototaxis

B. Photonasty

C. Phototropism

D. Photoperiodism

Answer: A



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15. Which one of the following is not coming under in-situ conservation?

- A. Natural parks
- B. Zoological park
- C. Biosphere reserve

D. Sanctuaries

Answer: B



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16. Excess of fluoride in drinking water causes.....

A. Lung disease

B. Fibrosis

C. Fluorosis

D. Intestinal infection

Answer: C



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Part II Answer Any Four Of The Following Questions

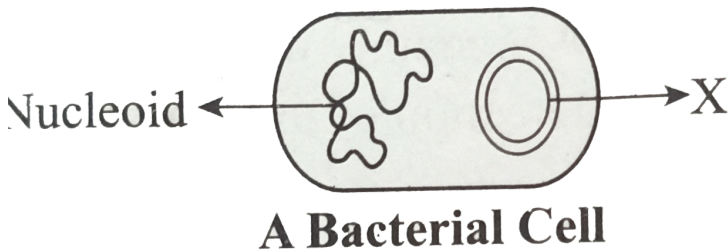
1. Write the F_2 phenotypic ratio of (i) Recessive epistasis (ii) Duplicate genes



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2. Observe the diagram and answer the question.

(i) Name the X (ii) Define X



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3. What is Phytoremediation?

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4. Expand the following terms. (a) CFC (b) C CS



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5. State any one advantage and one disadvantage of polyploid breeding.



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6. Mention the plant species or their products which are popularly known as (a) Black Gold of India (b) Queen of spices



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Part Iii Answer Any Three Questions

1. Enumerate the functions of tapetum.



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2. When two different genes came from same parent they tend to remain together.

(i) What is the name of this phenomenon?

(ii) Draw the cross with suitable example.

(iii) Write the observed phenotypic ratio.



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3. Differentiate between Somaclonal variations and Gametoclinal variation.



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4. What is secondary productivity? Explain its types.



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5. Give an account on clonal selection.



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Part Iv Answer All The Questions

1. Explain polygenic inheritance with an example.



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2. How will you classify organic compound based on the pattern of carbon chain ?



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3. What are the objectives of Afforestation programme?



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4. Explain different types of hydrophytes with examples.



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Part II Answer Any Four Of The Following Questions

1. How is juvenile phase different from reproductive phase?



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2. Arrange the following structures in correctly to indicate the process of spermatogenesis in a proper sequence.

Spermatid, Spermatozoa, Spermatogonia,
Secondary Spermatocyte.



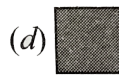
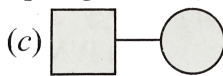
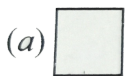
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3. The procedure of GIFT involves the transfer of female gametes into the fallopian tube, can gametes be transferred to the uterus to achieve the same result? Explain.



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4. Observe the symbol used pedigree analysis, and give the proper terms they represent.



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5. State any three goals of the human genome project.



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6. List out the major gases seem to be found in the primitive earth.



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Part Iii Answer Any Three Questions

1. Explain the process of replication of retrovirus after it gains entry into the human body.



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2. How is milk converted into curd ? Explain the process of curd formation.



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3. What are transgenic organisms?



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4. What is ecological density, crude density and population density ?



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5. How radioactive wastes are generated?



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Part IV Answer All The Questions

1. Give reason for the following statement.

(i) Luteal phase of menstrual cycle is also called as secretory phase.

(ii) Menstrual hygiene is essential for women.



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2. How is the two stage process of protein synthesis advantageous?



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3. Given an account on helminthic disease.



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4. What is the significance of the slope of regression in a species - area relationship?



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