



BIOLOGY

BOOKS - FULL MARKS BIOLOGY (TAMIL ENGLISH)

SAMPLE PAPER -17

Botany Part I

1. Coelorrhiza is found in

A. Paddy

B. Bean

C. Pea

D. Tridax

Answer: A



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2. Match the following :

Column I

- A. Cotyledon color
- B. Flower color
- C. Seed shape
- D. Pod shape

Column II

- (i) Inflated / Constricted
- (ii) Green / Yellow
- (iii) Round / wrinkled
- (iv) Purple / White

A. a) A - (i) , B - (iii) , C - (iv) , D - (ii)

B. b) A - (ii) , B - (iv) , C - (iii) , D - (i)

C. c) A - (iii) , B - (ii) , C - (iv) , D - (i)

D. d) A - (ii) , B - (iii) , C - (iv) , D - (i)

Answer: B



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3. Mechanism of crossing over involves the following stages . Select the correct sequence .

A. Tetrad stage → Synapsis → Bivalent stage → cross over

B. Synapsis → Tetrad → Crossing over → Terminalisation

C. Terminalisation → Tetrad → Bivalent → Terminalisation

D. Cross over → Bivalent → Tetrad →

Terminalisation

Answer: B



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4. Some of the characteristics of Bt cotton are

A. Long fibre and resistant to aphids

B. Medium yield , long fibre and resistant
to beetle pests

C. high yield and production of toxic protein crystals which kill dipteran pests

.

D. High yield and resistant to ball worms

Answer: B



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5. Spindle shaped pyramid is a character of

..... .

- A. Pond ecosystem
- B. Grassland ecosystem
- C. Parasite ecosystem
- D. Forest ecosystem

Answer: D



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6. With respect to Eichhornia

Statement A: It drains off oxygen from water and is seen growing in standing water.

Statement B: It is an indigenous species of our country.

A. Both Statements A and B are correct

B. Statement A is correct and Statement B is incorrect

C. Statement A is incorrect and Statement B is correct

D. Both Statements A and B are incorrect .

Answer: B



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7. Progeny obtained as a result of repeat self pollination of a cross pollinated crop is called

- A. pure line
- B. pedigree line
- C. inbreed line
- D. heterosis

Answer: A



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8. Any substance that removes the formation of gas in the gastro intestinal tract is called as

- A. a) Purgative
- B. b) Sedative
- C. c) Contraceptive
- D. d) Carminative

Answer: D



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1. At which cellular stage , does the pollen grains are usually liberated from anther ?

What happens to the generative cell if the pollen reaches the stigma ?



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2. Read the cross and answer the following

$RrYy$ (F1 hybrid) \times $rryy$ (recessive parent)

(a) Name the type of cross .

(b) Mention the ratio of the cross.



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3. X is a drug obtained from the barks of the plant name Y . Moreover X has a potent anti-malarial property . Name the drug - X and plant - Y .



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4. What is vivipary? Name a plant group which exhibits vivipary.



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5. Name few plant species used in green manuring.



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6. Differentiate bio - medicines and botanical medicines .



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Botany Part Iii

1. Write down the significances of parthenocarpy.



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2. Write the salient features of Sutton and Boveri concept.



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3. Write about the process of fermentation



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4. Give a brief account on Reed - swamp stage of succession .





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



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Botany Part Iv

1. Differentiate continous variation with discontinuous variation.



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2. Give a detailed account of Biotic and abiotic components of a pond ecosystem .



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3. How Agarose Gel Electrophoresis is performed ? Explain .



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4. What does competition refers to ? Classify and describe them .



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Zoology Part I

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

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

A. A and R are correct . R does not explain A

B. A is correct but R is incorrect

C. Both A and R are incorrect

D. R is the correct explanation for A

Answer: B



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2. A -Head of the sperm consists of acrosome and mitochondria.

R -Acrosome contains spiral rows of mitochondria.

A. Statement -I is true , Statement - II is false

B. Statement- I is false, Statement - II is true

C. Both the statements are true

D. Both the statements are false

Answer: D



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3. According to WHO , India is thelargest HIV affected country .

A. a) first

B. b) second

C. c) third

D. d) fourth

Answer: C



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4. Based on Lyon's hypothesis, mention the number of Barr bodies in XXY males, XO females.

A. Nil

B. One

C. Two

D. Infinity

Answer: A



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5. Incubation period for malaria ____

A. 7

B. 10

C. 12

D. 15

Answer: C



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6. Placental mammals develop during

A. Eocene

B. Oligocene

C. Pliocene

D. Paleocene

Answer: D



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7. Identify those correct sequence of ELISA testing .

A. a) Coating → Blocking → Detection
→ Read out

B. b) Detection → Read out → Coating
→ Blocking

C. c) Read out → Coating → Detection
→ Blocking

D. d) Blocking → Detection → Read out

→ Coating

Answer: A



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8. Tilapia fish is an exotic breed from

A. a) Mexico

B. b) South Africa

C. c) Canada

D. d) Central America

Answer: B



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Zoology Part II

1. What is species richness ?



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2. What does 4 R stands for in plastic waste management ?



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3. Genetically engineered Streptococci is used in medicine . How ?



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4. State the principles of Lamarck's Theory .



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5. Expand and define ORF .



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6. What are Mendelian disorders?



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1. Suggest few hygiene tips to face healthy and happy menses .



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2. Classify animals based on embryonic development and give an example for each .



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3. Write a note on Huntington's chorea .





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4. Explain the components of operon .



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5. What are DNA vaccines ?



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1. Point out the adaptive traits of aquatic animals .



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2. Taking the example of Peppered moth, explain the action of natural selection. What do you call the above phenomenon ?



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3. What is Ex-situ conservation?



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4. Explain the transcription process in prokaryotes .



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