



BIOLOGY

BOOKS - FULL MARKS BIOLOGY (TAMIL ENGLISH)

SAMPLE PAPER 18 (UNSOLVED)

Bio Botany Part I

1. The genes controlling the seven pea characters studied by Mendel are known to be

located on how many different chromosomes
?

A. Seven

B. Six

C. Five

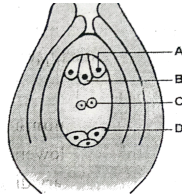
D. Four

Answer:



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2. Observe the diagram and select the correct option mentioning the parts A,B,C and D.



8-nucleate stage

- A**
- (a) Synergid
 - (b) Antipodals
 - (c) Egg
 - (d) Antipodals

- B**
- Egg
 - Synergid
 - Synergid
 - polar nuclei

- C**
- polar nuclei
 - polar nuclei
 - Antipodals
 - Egg

- D**
- Antipodals
 - Egg
 - polar nuclei
 - Synergid



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3. Accurate mapping of genes can be done by three point test cross because increases

A. Possibility of single cross over

B. Possibility of double cross over

C. Possibility of multiple cross over

D. Possibility of recombination frequency

Answer:



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4. Which one of the following palindromic base sequence in DNA can be easily cut at

about the middle by some particular restriction enzymes?

A. 5'CGTTCG 3' 3'ATCGTA 5'

B. 5'GATATG 3' 3'CTACTA 5'

C. 5' GAATTC 3' 3' CTTAAG 5'

D. 5'CACGTA 3' 3'CTCAGT 5'

Answer:



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5. Type of tissue culture used to produce virus free plants _____.

- A. Apical meristem
- B. Intercalary meristem
- C. Lateral meristem
- D. Plate meristem

Answer:



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6. Pond is a type of

- A. Forest ecosystem
- B. grassland ecosystem
- C. marine ecosystem
- D. fresh water ecosystem

Answer:



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7. Heating biomass in a low oxygen environment represents

A. a) apolysis

B. b) lipolysis

C. c) pyrolysis

D. d) hydrolysis

Answer:



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8. Importing better varieties and plants from outside and acclimatising them to local environment is called

A. cloning

B. heterosis

C. selection

D. introduction.

Answer:



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1. Why does the zygote divides only after the division of Primary endosperm cells ?



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2. Name the seven contrasting traits of Mendel.



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3. Classify mutations based on the effect on translation.



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4. Name of the food chain which is generally present in all type of ecosystem. Explain and write their significance.



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5. What are polyploids ? Mention its nature.



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6. Name the humors that are responsible for the health of human beings.



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Bio Botany Part Iii

1. Point out the differences between anemophilous flowers and ornithophilous

flowers.



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2. Explain the three type of duplication with necessary diagram.



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3. State the medicinal property of the following secondary metabolites obtained

from plants.

(a) Capsaicin (b) Vincristine (c) Quinine



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4. What is secondary productivity? Explain its types.



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5. Write two benefits of Rainwater Harvesting.



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Bio Botany Part Iv

1. (i) What are the ways through which the pollen tube enters into the ovule ? Explain.

(ii) What is the fate of pollen tube after reaching the embryo sac ?



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2. Write the effects of ozone depletion.



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3. What are single cell proteins? List out its uses ?



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4. (i) Define bio-geo chemical cycles.



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1. Is a degenerative phase.

A. a) Vegetative phase

B. b) Senescent phase

C. c) Juvenile phase

D. d) Reproductive phase

Answer:



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2. Let-Down reflex' is due to the effect of hormone.

A. a) Relaxin

B. b) Serotonin

C. c) Prostaglandins

D. d) Oxytocin

Answer:



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3. Identify the common international diseases.

A. a) Syphilis and candidiasis

B. b) Syphilis and gonorrhoea

C. c) AIDS and gonorrhoea

D. d) AIDS and hepatitis

Answer:



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4. Select the hormonal pair that reduces the depression.

A. a) Epinephrine and oxytocin

B. b) Serotonin and prostaglandin

C. c) Serotonin and Endorphins

D. d) Relaxin and oxytocin

Answer:



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5. Statement-I : Cyclosporin A , is an immunosuppressant .

Statement-II : Statins reduces the blood cholesterol level.

A. a) Both the statements are true

B. b) Both the statements are false

C. c) Statement - I is true, Statement-II is false

D. d) Statement-I is false , Statement- II is true.

Answer:



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6. Predation and parasitism are which type of interaction ?

A. (+ , +)

B. (+,0)

C. (-,-)

D. (+,-)

Answer:



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7. Which of the following is considered a hotspots of biodiversity in India?

- A. Western ghats
- B. Indo-gangetic plain
- C. Eastern Himalayas
- D. (a) and (c)

Answer:



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8. The permissible limit of noise is

A. 72 dB

B. 65 dB

C. 81 dB

D. 52 dB

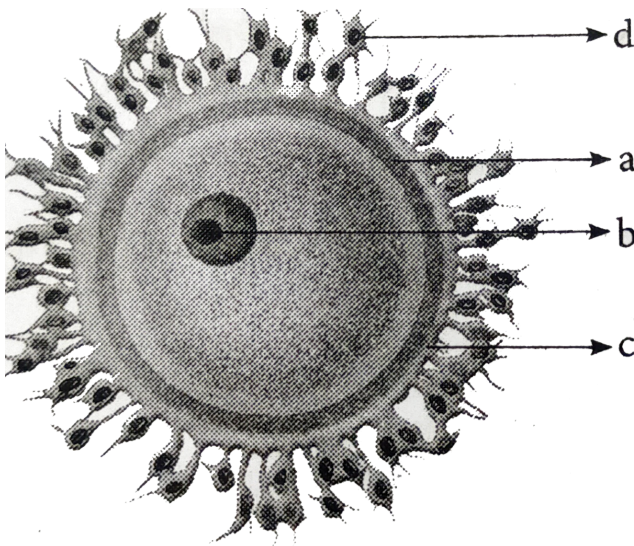
Answer:



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Bio Zoology Part Ii

1. Identify the given image and label its parts marked as a,b,c and d.



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2. Why are sex linked recessive characters more common in the male human beings?



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3. Mention any two ways in which single nucleotide polymorphism (SNPs) identified in human genome can bring revolutionary change in biological and medical science.



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4. Differentiate between the eating habit and brain size of Australopithecus and Ramapithecus.



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5. What are recombinant vaccines ? Explain the types .



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6. What is Acclimatisation ?



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Bio Zoology Part Iii

1. Give the definition for (a) Arrhenotoky (b) Thelytoky (c) Amphitoky.



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2. Name the hormones produced from the placenta during pregnancy.



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3. What is micro-testicular sperm extraction (TESE)?



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4. How yogurt is produced in industries ?
What is the reason behind the flavour of yogurt ?



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5. Explain the opsonisation property of antibodies.



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1. (a) Explain the statement that color blindness is perfect example for criss -cross inheritance with a flowchart.



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2. Write the properties of water.



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3. In sickle cell anaemia the glutamic acid is replaced by



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4. What are the sources of solid wastes? How are solid wastes managed?



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