



BIOLOGY

BOOKS - ARIHANT PUBLICATION

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Section A Botany Group I

1. Choose the correct option

The process by which scion is inserted

successfully into the stock to form a new plant is called

A. layering

B. cutting

C. grafting

D. budding

Answer: C



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2. In, pollen tube enters through micropyle into the ovule.

A. porogamy

B. chalazogamy

C. mesogamy

D. herkogamy

Answer: A



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3. If allele for tallness (TT) is dominant and dwarfness (tt) is recessive , then in cross between _____ 50 % of the offsprings will be dwarf .

A. $T \times$

B. $Tt \times$

C. \times

D. $Tt \times Tt$

Answer: C



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4. In secondary treatment of sewage in open bioreactors , the microorganisms grow and multiply to form _____

A. manure

B. compost

C. sludge

D. sediment

Answer: C



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5. When propagating unit like seeds and spores enter a barren area to initiate the process of succession , it is called :

A. nudation

B. reaction

C. ecesis

D. migration

Answer: C



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6. Correct the statements of each bit, if necessary, by changing the underlined words only

The number of deaths taking place in a particular population in unit time is called natality



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7. Correct the statements of each bit, if necessary, by changing the underlined words only:

Excessive nourishment that causes algal bloom is known as biomagnification.



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8. Correct the statements of each bit, if necessary, by changing the underlined words only:

Naked plant cell without cell wall is called plasmalemma.



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9. Correct the statements of each bit, if necessary, by changing the underlined words only

The complementary base of adenine in RNA molecule is thymine.



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10. Correct the statements:

The outer sterile tissue that provides nourishment to the developing microspores in microsporangia is called endothecium.



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Section A Botany Group Ii

1. Write notes on any three of the following, each with 2 to 3 important points:

Food chain

Codominance

BOTfortification

Alcoholic beverages

BOTdiversity hot spots

Operon concept.



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2. Write notes on any three of the following,
each with 2 to 3 important points:

Food chain

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3. Write notes on any three of the following, each with 2 to 3 important points:

Food chain

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Alcoholic beverages

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Operon concept.



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4. Write note on any three of the following:

each with two to three important points:



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5. Write note on any three of the following:

each with two to three important points:



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6. Write note on any three of the following:

each with two to three important points:



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7. Differentiate between any one pair of the following with 2 to 3 important points.

Genetic diversity and Species diversity



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8. Differentiate between any one pair of the following with 2 to 3 important points.

Explant and Callus



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9. Differentiate between any one pair of the following with 2 to 3 important points.

Nuclear endosperm and Cellular endosperm



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Section A Botany Group Iii

1. Give an account of development of female gametophyte in angiosperms.



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2. Describe initiation step of translation in prokaryotes.



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3. Answer within 200 words : Give an account of secondary air pollutants .



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4. Discuss Mendel's dihybrid cross with checker board.



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Section B Zoology Group I

1. Choose the correct answer from the choices given under each bit/ Give the answer in one word only :

Which species in honeybees is commercially cultivated ?

A. *Apis dorsata*

B. *Apis florea*

C. *Apis mellifera*

D. *Apis indica*

Answer: C



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2. Human embryo is protected by which cavity?

- A. Amniotic cavity
- B. Pleural cavity
- C. Peritoneal cavity
- D. Neural cavity

Answer: A



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3. Which is an exotic breed of cattle?

A. Jersey

B. Sahiwal

C. Gir

D. Red Sindhi

Answer: A



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4. What is called protein pathogen that does not contain nucleic acid ?



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5. Which department of the Govt. of India is the nodal centre for Indian- biosafety network ?



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6. Fill in the blanks with correct answer(s) /

Correct the underlined portion of the sentences

Genetically engineered rice rich in vitamin-A is known as



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7. Fill in the blanks with correct answer(s)/

Correct the underlined portion of the sentences :

The infective stage of malarial parasite is _____.



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8. Fill in the blanks with correct answer(s) /

Correct the underlined portion of the sentences

The transgenic mouse is called as



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9. Fill in the blanks with correct answer(s) /

Correct the underlined portion of the sentences

The 'Father of Modern Palaeontology is
Leonardo da Vinci .



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10. Fill in the blanks with correct answer(s) /

Correct the underlined portion of the sentences

HIV is treated using a combination of medicines called antibacterial therapy.



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Section B Zoology Group II

1. Answer any three of the following (restrict each answer 2 to 3 important sentences).

What is innate immunity?



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2. Answer any three of the following (restrict each answer 2 to 3 important sentences).

What is Hardy-Weinberg principle?



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3. Answer any three of the following (restrict each answer 2 to 3 important sentences).

What is gene flow?



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4. Answer any three of the following (restrict each answer 2 to 3 important sentences).

What is recombinant vaccine?



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5. Answer any three of the following (restrict each answer 2 to 3 important sentences).

What is patent?



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6. Answer any three of the following (restrict each answer 2 to 3 important sentences).

What are gestation and parturition?



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7. Differentiate between any one of the following (restrict the answer 3 to 4 important sentences).

Corpus luteum and Corpus albicans



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8. Differentiate between any one of the following (restrict the answer 3 to 4 important sentences).

Broilers and Layers



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9. Differentiate between : Ex Vivo gene therapy and in Vivo gene therapy.



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Section B Zoology Group Iii

1. Give an account of the human female reproductive system,



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2. Discuss theory of natural selection proposed by darwin.



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3. Describe the chromosomal basic of sex determination in human,honey bee and birds.



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4. Write notes on any two of the following:

Seminiferous tubule



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5. Write short notes on any two of the following:

Down.s syndrome



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6. Write notes on any two of the following

Thalassemia



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7. Write notes on any two of the following:

Genetically modified organism



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