

BIOLOGY

BOOKS - ARIHANT PRAKASHAN

VERY SIMILAR TEST 5

Section A Botany Group A

1. Fill in the blanks selecting the appropriate terms given under each bit:

(a) Which of the following causes biomagnification?

A. SO_2

B. Mercury

C. DDT

D. Both (ii) and (iii)

Answer:



- **2.** Fill in the blanks selecting the appropriate terms given under each bit:
- (b) The phenomenon wherein, the ovary develops into a fruit without fertilisation is called as
 - A. apomixis
 - B. parthenocarpy
 - C. a sexual reproduction
 - D. sexual reproduction

Answer:

3. Fill in the blanks selecting the appropriate terms given under each bit:

(c) UAA, UAG and UGA are

A. Starting codons

B. non-overlapping codons

C. non-sense codons

D. degenerate codons

Answer:

4. Fill in the blanks selecting the appropriate terms given under each bit:

(d) When a single gene exhibits more than one phenotypic effect, the phenomenon is known as

A. polygeny

B. multiple allelism

C. pleiotropy

D. codominance

Answer:



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- **5.** Fill in the blanks selecting the appropriate terms given under each bit:
- (e) A free-living bacteria that can fix nitrogen in the soil is

A. Spirulina

- B. Azospirillum
- C. Pseudomonas
- D. Saccharomyces cerevisiae

Answer:



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6. Correct the statements of each bit if required, by changing the underlined word only:

(a) Primary succession starts at a place where living matter have existed previously.



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7. Correct the statements of each bit if required, by changing the underlined word only:

Homogametes are morphologically distinct as male and female gametes.



- **8.** Correct the statements of each bit if required, by changing the underlined word only:
- (c) Embryo develops from zygote at the chalazal end of embryo sac.



9. Correct the statements of each bit if required, by changing the underlined word only:

(d) Two strands of DNA molecule run parallel to each other.



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10. Correct the statements of each bit if required, by changing the underlined word only:

(e) Cross breeding involves crossing between male and female animals of two different species.



Section A Botany Group B

1. Pyramid of energy



- **2.** Write short note on any three of the following each with two or three important points:
- (b) Anatomical adaptations in xerophytes



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3. Write short note on any three of the following each with two or three important points:

(c) Copper releasing IUDs



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4. Write short note on Lactation



5. Write short note on any three of the following each with two or three important points:

(e) Embryo rescue



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6. Write short note on any three of the following each with two or three important points:

(f) Back cross



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7. Differentiate between any one pair of the following, each with three to four important points.

(a) Geitonogamy and Xenogamy



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8. Differentiate between any one pair of the following, each with three to four important points.

(b) Sera! and Climax community of ecological succession



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9. Differentiate between any one pair of the following, each with three to four important points.

(c) Callus and Suspension culture



Section A Botany Group C

1. Describe the structure of DNA?



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2. Answer any two of the following questions each within 200 words:

Describe in sequence, the process of microsporogenesis in angiosperms. Comment on the structure of a mature pollen grain.



3. Explain monohybrid cross taking seed coat colour as a trait in Pisum sativum. Workout the cross upto F_2 - generation



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4. Answer any two of the following questions each within 200 words:

Briefly describe the steps involved in a plant breeding programme.

Section B Zoology Group A

- 1. Choose the correct answer from the choices given under each bit/Give the answer in one word only:
- (a) What is the name of the disease for which the first clinical gene therapy was done?



- 2. Choose the correct answer from the choices given under each bit/Give the answer in one word only:
- (b) Humoral immune response was confered by which type of cells?



3. Choose the correct answer from the choices given under each bit/Give the answer in one word only Which hormone regulates the sertoli cells ?

- A. Follicle stimulating hormone
- B. Luteinising hormone
- C. Growth hormone
- D. Progesterone

Answer:



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

(d) The condition of low sperm count is known as

A. oligospermia

B. azospermia

C. PCOS

D. None of these

Answer:



5. The karyotype in Klinefelter. syndrome is

A.

Β.

C.

D.

Answer:



6. Fill in the blanks with correct answer(s). Correct the underlined portion of the sentence:

(a) $\frac{\text{Oral ty}21a}{\text{typhoid.}}$ is an inactivated vaccine for typhoid.



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

Correct the underlined portion of the sentence:

(b) The first larval stage of Ascaris is $\underline{\mathrm{filariform}}$

•



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

Correct the underlined portion of the sentence:

(c) $\underline{\operatorname{IgA}}$ is the first antibody to be synthesised in neonatal babies.



9. Fill in the blanks with correct answer(s). Correct the underlined portion of the sentence:

(d) The primitive atmosphere was oxidising.



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- **10.** Fill in the blanks with correct answer(s).
- Correct the underlined portion of the sentence:
- (e) <u>Sunandini</u> was developed by crossing

Brown Swiss bull with Sahiwal cows.

Section B Zoology Group B

- **1.** Answer any three of the following (restrict each answer to two or three important Sentences):
- (a) What may be the possible effects of indiscriminate use of steroids and analgesics to the body?



2. Answer any three of the following (restrict each answer to two or three important Sentences):

(b) What is a patent?



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3. Answer any three of the following (restrict each answer to two or three important Sentences):

(c) How is in vitro fertilisation and embryo transfer carried out?



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4. Why are human females rarely haemophilic?



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5. Answer any three of the following (restrict each answer to two or three important Sentences):

(e) Write about Indian polutry breeds.



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6. Answer any three of the following (restrict each answer to two or three important Sentences):

(f) Discuss two common allergic reactions.



- **7.** Differentiate between any one of the following pairs (restrict the answer to three or four important differences):
- (a) Interferons and Antibodies



- **8.** Differentiate between any one of the following pairs (restrict the answer to three or four important differences):
- (b) Darwin.s and de Vries concept of evolution





9. What are benign and malignant tumours?



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Section B Zoology Group C

1. Answers any two questions (restrict each answer within 200 words):

Write notes on any two of the following:

(a) Founder effect

2. Answers any two questions (restrict each answer within 200 words):

Write notes on any two of the following:

(b) Gynandromorph



3. Answers any two questions (restrict each answer within 200 words):

Write notes on any two of the following:

(c) Cleavage



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4.

Write notes on the following:

The similarities in spermatogenesis and oogenesis.



5. Answers any two questions (restrict each answer within 200 words):

What do you understand by sexdetermination? Describe sex-determination in honeybee.



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6. Describe, how the changing levels of FSH, LH and progesterone during menstrual cycle

induce changes in the ovary and the uterus in human female.



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7. Answers any the question:

Describe the strategy involved in the production of Bt crops.

