



BIOLOGY

BOOKS - ARIHANT PRAKASHAN

VERY SIMILAR TEST 4

Section A Botany Group A

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

(a) Effects of air pollution can be observed usually on the of plants.

A. leaves

B. flowers

C. stems

D. roots

Answer:



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

(b) Cross-pollination is also known as

A. autogamy

B. geitonogamy

C. xenogamy

D. cleistogamy

Answer:



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3. In eukaryotic cells, the RNA transcribed from DNA is called-..... .

A. rRNA

B. RNA

C. cDNA

D. heterogeneous mRNA

Answer:



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4. The gene which controls many characters is called

A. codominant gene

B. polygene

C. pleiotropic gene

D. multiple gene

Answer:



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

(e) Chloramphenicol can be obtained from the bacterium

A. *Streptomyces venezuelae*

B. *Streptomyces griseus*

C. *Streptomyces aureofaciens*

D. *Streptomyces noursei*

Answer:



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6. Correct the statement of each bit, if necessary, by changing the underlined word only:

(a) Haploid plantlets can be produced by embryo culture.



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7. Correct the statement of each bit, if necessary, by changing the underlined word

only:

(b) Spirogyra reproduces by regeneration.



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8. The phenomenon of the formation of gametophyte directly from sporophyte without meiosis is



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9. In a cross between red and white flowered plants, F_1 - hybrids are pink. This is called quantitative dominance



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10. The pioneer community in hydrosere is submerged plants.



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

(a) Grafting



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

(b) Autogamy



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3. Write notes any four of the following each with 2 to 3 important points:

Central dogma



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4. Write short notes on any three of the following each with two or three important

points :

(d) Somaclonal variations



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

(e) Ecosystem



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

(f) Population density



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7. Differentiate between the following with 2 to 3 important points : Somatic embryogenesis and Somatic hybridization



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8. Differentiate between any one pair of the following with three or four important points:

(b) Grafting and Layering



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9. Differentiate between Gross primary productivity and Net primary productivity



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Section A Botany Group C

1. Answer any two of the following :

5. Explain Griffith's experiment, How did Oswald, MacLeod and McCarty come to the conclusion that DNA is the hereditary material?



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2. Answer any two of the following :

(i) Explain the role of DNA dependent RNA

polymerase in initiation, elongation and termination during transcription in bacterial cell.

(ii) How transcription is a more complex process in eukaryotic cells than that in prokaryotic cells?



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3. Answer any two of the following :

(i) Draw a longitudinal section of the pistil of an angiosperm showing the growth of pollen

tube up to the micropyle of ovule, Label (a) stigma, (b) embryo sac, (c) pollen tube, (d) micropyle,

(ii) Explain the events that occurs, up to fertilisation, when the compatible pollen grain lands on the stigma.



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4. Answer any two of the following :

Explain the process of sewage water treatment before it can be discharged into

natural water bodies. Why is this treatment essential?



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Section B Zoology Group A

1. Which protein is in sry gene of Y-chromosome?



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2. The plexus of blood capillaries that helps maintain the temperature of the testis for normal functioning.



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

(c) The supermouse is a genetically modified animal with

(i) insulin transgene

(ii) lipid biosynthesis transgene

(iii) growth hormone transgene

(iv) steroid hormone transgene



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4. Which one of the following is an oncogenic virus?



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5. In which type of pill, both oestrogen and progestin are present in nearly the same amount?



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

(a) Homologous organs are the organs which

perform similar functions but have different embryological origin.



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

Correct the underlined portion of the sentences:

(b) Cellular changes in a body as a result of any wound or injury is called



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

Correct the underlined portion of the sentences:

(c) Active immunisation against tetanus and diphtheria is achieved by



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

Correct the underlined portion of the sentences:

(d) The characteristic flight of the queen bee that involve mating is called



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10. The toxin released due to rupture of RBCs in malaria is haemoglobin.



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Section B Zoology Group B

1. Answer any three of the following (restrict your answer to two or three important sentences):

(a) Incubation period of the malarial parasite



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

(b) Cryopreservation





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3. Answer following (restrict your answer to two or three important sentences):

(c) Cosmids



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4. Answer the following (restrict your answer to two or three important sentences):

(d) Theory of biogenesis



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5. Answer the following (restrict your answer to two or three important sentences):

(e) Metastasis



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

(f) Lactational amenorrhea



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7. Differentiate between any one of the following :

Cancerous cell and Normal cell



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8. Different the following (Restrict each answer three to four important sentences):

Homologous organ and Analogous organ



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9. Primary immune response and Secondary immune response.



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Section B Zoology Group C

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

Write short notes on any two of the following:

(a) Menopause

(b) Parturition

(c) Types of sex-linked genes

(d) Codominance



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

Describe the embryological evidences of organic evolution.



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

Describe the structure of a mature human sperm with the help of a well-labelled diagram.



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4. Answer any two questions (restrict each answer within 200 words):

Give a detailed account of the enzymes used in recombinant DNA technology.



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