



# BIOLOGY

## BOOKS - ARIHANT PRAKASHAN

### VERY SIMILAR TEST 1

#### Section A Botany

1. Depletion of ozone layer is speeded up by the ..... atom present in CFC.

A. copper

B. chlorine

C. carbon

D. calcium

**Answer: B**



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2. Dichogamy is found in bisexual flowers where stamens and carpels mature at same time.

A. Dichogamy

B. Cleistogamy

C. Herkogamy

D. Dicliny

**Answer: A**



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**3.** In the operon system , the repressor protein can bind only with the :

A. regulator gene

B. operator gene

C. structural gene

D. promoter gene

**Answer: B**



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4. Which one of the following represents a test cross?

A.  $W W \times W W$

B.  $W w \times W w$

C.  $Ww \times w w$

D.  $WW \times WW$

**Answer: C**



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

Citric acid is produced by the fungus .....

A. Acetobacter

B. Spirulina

C. Aspergillus flavus

D. Aspergillus niger

**Answer: D**



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

only :

AUG is a termination codon.



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

In Bryophyllum, a germinating bud appears from the eye present at the leaf margin.



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

Net primary productivity is calculated by taking into consideration gross primary productivity and photosynthesis.



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



only :

An ovule is a differentiated megasporangium.



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

The process of emasculation is required for natural hybridisation.



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**11.** Write short note of the following with two important points :

Importance of decomposer in an ecosystem



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**12.** Write short notes on the following in 2 to 3 sentences.

Pleiotropy



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**13.** Write short note of the following each with two or three important points :

Morphological adaptations in roots of hydrophytes



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**14.** Write note

Anther culture



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**15.** Write a short note on micropropagation.



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**16.** Write short note on Parthenogenesis.



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**17.** Differentiate between with 3 to 4 important points

Chemical and Biological method of pest control.



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**18.** Differentiate between any one pair of the following with three to four important points :

Population and Community



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**19.** Differentiate between any one pair of the following with three to four important points :

Microsporogenesis and Megaspороgenesis



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**20.** Draw the diagram of megasporangium and label its parts. Also, write briefly about the parts of a megasporangium.



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**21.** State and explain Mendel's laws of inheritance.



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**22.** Name the components of lac operon and discuss their role.



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**23.** What are biofertilisers ? Describe their role in agriculture. Why are they preferred over chemical fertilisers ?



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## Section B Zoology

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



Which organism is used as the cloning host cell to produce humulin ?



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

Which drug is obtained from cocoa plant ?



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

The cells formed by the division of zygote are

- A. Blastula
- B. blastomeres
- C. blastocoel
- D. None of these

**Answer: B**



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4. Oral contraceptives check ovulation by inhibiting the secretion of

A. follicle stimulating hormone

B. luteinising hormone

C. Both (i) and (ii)

D. All of the above

**Answer: C**



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5. Two allelic genes are located on the :

- A. same chromosome
- B. two homologous chromosome
- C. two non-homologous chromosome
- D. any two different chromosomes

**Answer: B**



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6. Cellular barriers forms first line of defence.



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

Correct the underlined portion of the sentences :

..... on activation lead to tumour formation.



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

Correct the underlined portion of the sentences :

HIV belongs to the group of .....



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

Correct the underlined portion of the sentences :

The earliest form of the horse was .....,  
which lived in the plains of North America.



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

Correct the underlined portion of the  
sentences :

The first antibiotic extracted from bacterial  
culture is nystatin.



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**11.** State the three characteristics of acquired immunity.



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**12.** Why do lepidopterans die when they feed on Bt cotton plant ? Explain how does it happen.



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**13.** Name and explain the surgical method advised to human males and females as a means of birth control. Mention its one advantage and one disadvantage.



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**14.** What are the homologous organs or divergent evolution?



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**15.** What are the reasons of drug abuse by the youth?



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**16.** What is inbreeding depression and how is it caused in organism ? Write any two advantages in inbreeding.



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**17.** Differentiate between any one of the following pairs. (Restrict each answer to three or four important sentences) :

Carcinoma and Sarcoma



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**18.** Differentiate between any one of the following pairs. (Restrict each answer to three or four important sentences) :

# Geographical isolation and Reproductive isolation



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**19.** Differentiate between any one of the following pairs. (Restrict each answer to three or four important sentences) :

Magna and Minuta stages of life cycle of *Entamoeba histolytica*.



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**20. Writes notes of the following :**

Characteristics of Ramapithecus



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**21. Write notes on any two of the following:**

Turner syndrome.



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**22.** Writes notes of the following :

Menstrual phase of the menstrual cycle



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**23.** Discuss the role of hormones in spermatogenesis.



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24. During the reproductive cycle of a human female when, where and how does, placenta develop ? What is the function of placenta during pergnancy and embryo development ?



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25. Explain the causes, inheritance pattern and symptoms of any two Mendelian genetic disorders.



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**26.** Name the source of Taq polymerase. Explain the advantage of its use in biotechnology. Also, explain the process used for amplification of genes.



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## Section A Botany Group A

**1.** Anna sagar pond in Lapodiya village in mainly used for....purpose.



A. irrigation

B. religious rituals

C. water the plants

D. drinking

**Answer:**



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2. After fertilisation, the ovary develops into.....

A. seed

B. seed coat

C. fruit

D. fruit wall

**Answer:**



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**3.** .....is a polymerising enzyme which elongates leading strands and okazaki fragments.

A. Poly  $\gamma$

B. Poly  $\delta$

C. Poly  $\varepsilon$

D. Poly  $\beta$

**Answer:**



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4. The genotype of a person with Turner's syndrome will be .....

A.  $44 + XXY$

B.  $44 + XYY$

C.  $44 + XO$

D.  $44 + XXYY$

**Answer:**



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5. Fill in the blank: In pest control of crop plants \_\_\_\_\_ has pesticidal properties.

A. Rhizobium

B. Poxviruses

C. Frankia

D. Baculoviruses

**Answer:**



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

The efficiency of biomass transfer from one trophic level to another is approximately 10%.



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7. Correct the statement of each bit, if necessary, by changing the underlined word only: Suckers of banana and Chrysanthemum are examples of l("underground")` stem.



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

Cells of endothecium are ephemeral and degenerate completely before microspore mother cell undergo meiosis.



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

only:

RNA Pol III enzyme adds a poly-A tail of about 200 adenine nucleotide to the 3. end of the primary transcript.



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

Azotobacter is a symbiotic bacteria involved



in process of biological nitrogen-fixation in roots of legumes.



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## Section A Botany Group B

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

Sedimentary cycle



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

Parasitic adaptations



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

Significance of vegetative propagation



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4. Write notes on any three of the following each with two to three important points:

Adaptations of self-pollination



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

Objectives of hybridisation



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

Applications of DNA fingerprinting



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7. Differentiate with three to four important points between Anemophily and hydrophily



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

Sex ratio and age distribution



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

Honey and beeswax



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**10.** Describe significance of fruit formation.



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**11.** Write note on

Human genome project.



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**12.** Give an account of the lac operon in E.coli.



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**13.** Write Shortnotes on: Microbes in household products



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## Section B Zoology Group A

**1.** By suppressing the expression of which enzyme, the process of fruit ripening can be delayed?



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2. Name the property of normal cells by which uncontrolled growth of cell is inhibited .



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3. The placental hormone which inhibits contractions in uterine wall is

A. chorionic gonadotropin

B. progesterone



C. relaxin

D. human placental lactogen

**Answer:**



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4. Which contraceptive method involves withdrawal of penis from vagina just before ejaculation?

A. Periodic abstinence

B. Coitus interruptus

C. Lactational amenorrhea

D. MTP

**Answer:**



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5. When the ratio of  $X/A=1.0$  in genic balance theory, which type of sex is expressed?

A. Triploid female

B. Normal female

C.

D. Both (i) and (ii)

**Answer:**



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**6.** Fine Needle Aspiration Cytology (FNAC) is a method for diagnosis of HIV



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7. ....is a digenetic nematode parasite, transmitted by mosquitoes like Culex, Aedes or Anopheles.



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8. Diseases like arthritis, cardiovascular diseases, brain diseases, etc., are non-communicable and .....diseases.



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9. The environment of primitive earth was.....in nature.



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10. Some viral diseases of plants are Newcastle's disease Marek's disease, fowlpox, etc.



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1. What is alcohol abuse or alcoholism?



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2. What is live vector vaccine?



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3. (Restrict to 2 or 3 important sentences).

What are the causes of infertility in men ?



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4. What is fossilisation?



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5. Opiate narcotic is :



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6. What is white revolution?



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7. Differentiate between any one of the following pairs (restrict the answer to three or four important differences)

Physical changes of Adolescence and  
Behavioural Changes of adolescence



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8. Differentiate between any one of the following pairs (restrict the answer to three or



four important differences)

Chemical evolution and Biological evolution



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9. Differentiate between any one of the following pairs (restrict the answer to three or four important differences)

Treatment of cancer and Treatment of AID



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**10.** Write notes on any two of the following

Thalassemia



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**11.** Write notes on any two of the following

Spermatogenesis



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**12.** Write notes on any two of the following

T.S. of human testis



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**13.** Describe the roles of male accessory glands

with respect to semen production.



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**14.** Write short notes on the following

Chromosomal basis of inheritance.



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**15.** Describe the two types of gene therapy.

Also mention ethical concerns associated with gene therapy.



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