



# BIOLOGY

## BOOKS - ARIHANT PUBLICATION

### SAMPLE PAPER 1

#### Section A Botany Group I

1. The stem-root transition zone is

A. hypocotyl

B. epicotyl

C. plumule

D. embryo

**Answer:**



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2. 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:**



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**3.** Germination in which cotyledon and endosperm do not come out of the soil is called:

A. Vivipary

B. Hypogeal

C. Epigeal

D. Photoblastic

**Answer:**



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**4.** The first community that establishes itself in a habitat is climax community.





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5. The motile asexual reproductive units produced by algae are called buds.



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6. Fill in the blanks

If the concentration of.....is higher in culture medium, the tissue forms shoots with leaves.



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## 7. Fill in the blanks

.....are responsible for production of biogas.



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## 8. Fill in the blanks

.....catalyses the transcription of all mRNA from all protein coding genes.



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9. The change of the genetic materials is called\_\_\_\_\_.



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10. Fill in the blanks

Natural genetic engineer used in modification of plants.



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1. Write notes with 2 to 3 important points

Back cross



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2. Write notes with 2 to 3 important points

*Bacillus thuringiensis*



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**3. Write notes with 2 to 3 important points**

Ten per cent law



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**4. Write notes with 2 to 3 important points :**

Antibiotic production



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5. Write notes with 2 to 3 important points :

Polygenic inheritance



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6. Write notes with 2 to 3 important points

Genetic code



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7. Differentiate between with 2 to 3 important points

Grafting and Layering



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8. Differentiate between with 2 to 3 important points

Anemophily and Entomophily



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9. Differentiate between with 2 to 3 important points

DNA and RNA



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## Section A Botany Group Iii

1. Briefly discuss the formation of male gametophyte.



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2. Explain transcription ?



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3. What is genetic engineering process?

Mention its applications



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4. What is an age pyramid? Explain the three kinds of age pyramids representing human

population along with the characteristics of each of them.



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## Section B Zoology Group I

1. The genotype of man having sexual character of female is

A. XXX

B. XO

C. XYY

D. XXY

**Answer:**



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**2. The causative agent of amoebiasis is**

A. E.coli

B. Entamoeba histolytica

C. Leishmania donovani

D. Trypanosoma gambiense

**Answer:**



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**3.** Loss of reproductive capacity in a woman after a certain age is called

A. menstruation

B. menarche

C. menopause



D. ageing

**Answer:**



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4. Theory of catastrophism for origin of life was perpetuated by which scientist?



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5. Which enzyme used in RDT have the ability to recognise and cut specific nucleotide sequences?



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6. ....induces dreamy state of consciousness in an individual.



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7. Barr bodies are found in.....of a woman



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8. ....is the sequence from where replication of DNA initiates.



**Watch Video Solution**

9. Ranikhet is adisease of fishes.



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10. The tests conducted for determining AIDS and typhoid are..... test and ..... test respectively.



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## Section B Zoology Group Ii

1. Why is inbreeding considered a harmful practice?



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2. What is immunity ? Explain innate and acquired immunity.

or

What is immunity? Discuss different type of immunity .



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3. Write short note on: Adaptive radiation



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4. What is polymerase chain reaction



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5. What is addiction



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6. Discuss the role of hormones in spermatogenesis.



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**7. Cancer cells and Normal cells.**



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**8. Differentiate between with 2 to 3 important points**

**Aquaculture and pisciculture**



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9. Differentiate between with 2 to 3 important points

Homoloogous organs and analogous organs



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## Section B Zoology Group Iii

1. Describe the characteristics of sex-linked inheritance and write about Y-linked traits in humans beings. Name any two disorders that occur due to sex-linked inheritance.





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**2. Give an account of the secondary sex organs of human male reproductive system**



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**3. What do you mean by chemical evolution?**



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#### 4. What is Down's syndrome ?



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#### 5. Write notes

Ethical issues



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#### 6. Write notes on Opioids



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7. Write notes on Mutation theory of evolution



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