

BIOLOGY

BOOKS - SUPER COMPANION 5 IN 1

SUPPLEMENTARY EXAMINATION PAPER JULY -2015

Part A

1. Define embryogenesis.



2. Mention the asexual reproductive structures of Penicillium.



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3. Name the fungus that produces cyclosporin

A.



4. Lactose is termed as inducer in lac operon. Give reason.



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5. What are eurythermal organisms?



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6. Define transcription?



7. Retroviruses are disarmed before using to deliver desirable genes into animal cells. Why?



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8. What is saltation?



9. Disposal of sewage into water without proper treatment may cause outbreak of serious diseases. Give reason.



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10. How does fragmentation of large habitats due to human activities lead to population decline?



1. Mention any two natural methods of birth control.



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2. Mention the possible genotypes of A and B blood group individuals.



3. Write two examples for loss of biodiversity due to alien species invasions.



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4. Placenta is the structural and functional unit between foetus and maternal body, Substantiate the statement.



5. What is gene therapy? Name the disorder to which clinical gene therapy was given first.



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6. The shape of RBCs of sickle cell anaemia patients change to elongated sickle like structure. Give reason.



7. Classify restriction enzymes. Mention the function of each.



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8. Name the pioneer species in primary succession and primary succession in water.



1. What is a heterothallic condition?

Differentiate between staminate and pistillate flowers.



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2. What are cleistogamous flowers? Write their significance.



3. How do the following assisted reproductive technologies assist the couples to have children? (a) In vitro Fertilization (b) Zygote Intrafallopian Transfer .(c) Gamete Intra Fallopian Transfer



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4. Name the six stages of human evolution in the correct sequence.



5. What is contact inhibition? Mention the types of tumours.



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6. Draw a labelled diagram of plasmid PBR 322.



7. In which ways genetically modified plants are useful?



- **8.** (a) Single cell proteins can be used as an alternate source of proteins for human nutrition. Illustrate with two examples.
- (b) How can tissue culture be applied to recover healthy plants from virus-infected plants?



Part D Section I

1. Write the events of development of female gametophyte in correct order.



2. What is incomplete dominance? Explain inheritance of flower colour in snapdragon



3. Write a diagrammatic representation of life cycle of HIV.



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4. Describe the parts of a biogas plant with a labelled diagram.



5. Describe Frederick Griffth's experiment to show transformation in bacteria.



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6. (a) Define the following terms :(i)

Commensalism.

(ii) Brood parasitism.

(iii) Mutualism



7. Mention four basic processes that fluctuate the density of a population in a given habitat.



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Part D Section li

1. Draw a neat labelled diagram of human male reproductive system.



2. Describe the process of translation of mRNA.



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3. Explain the important steps involved in the process of decomposition.



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4. (a) Explain the types of outbreeding processes employed to improve desirable qualities of animals.



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5. Write any two processes dealt with to increase the yield and quality of milk in dairy farm management.

(ii) Artificial Insemination:



6. What is Eutrophication? Discuss the phenomenon of accelerated eutrophication.

