



BIOLOGY

BOOKS - SUPER COMPANION 5 IN 1

SUPER MODEL QUESTION PAPER 2

Part A

1. What are gemmules?



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2. Name the stage of the occurrence of more than one embryo in a seed.



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3. Define Amphimixis.



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4. Mention any two methods of birth control?



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5. What are multiple alleles ? Why the alleles I^A and I^B for blood group are considered codominant ?



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6. Define genetic code.



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7. Define genetic drift/Sewall Wright effects.



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8. What is an explant?



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9. Write any two Bt resistant crops.



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10. What is commensalism?



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Part B

1. How is biodiversity important for ecosystem functioning ?



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2. To whom a patent is given ?



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3. How are restriction endonuclease named ?



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4. What are methanogens? Mention its composition.



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5. What is apiculture? How is it important in our lives?



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6. Briefly mention the contribution of T.H. Morgan in genetics.



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7. What is meant by emasculation? When and why does a plant breeder employ this technique?



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8. Distinguish between eurythermal and stenothermal organisms with two examples for each.



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1. Draw a labelled diagram of the female reproductive system.



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2. The diagram represents an anatropous ovule. Label its parts -



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3. List the differences between external fertilisation and internal fertilisation?



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4. How is nucleosome formed? Draw a diagram of the nucleosome.



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5. Explain the role of T-lymphocytes in cell mediated Immunity?



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6. Write the scientific name of microbes that produces Streptokinase, Statin and Citric acid.



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7. List the harmful effects caused by alcohol drug abuse.



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8. (a) Draw a neat labelled diagram of plasmid PBR 322.

(b) Name the source of taq polymerase.



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Part D Section I

1. Write a brief account on genetically engineered insulin.



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2. Explain the effects to temperature n plants and animals ?



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3. Describe the Semiconservative method of DNA replication.



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4. Show a diagrammatic representation of the mature embryo sac.



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5. Describe briefly the structure of a human sperm.



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6. What is gene therapy? Explain the types.

Add a note on its applications?



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Part D Section Ii

1. What are adaptations? Discuss any four adaptations found in plants and animals.



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2. What are algal blooms? How are they formed? Give the harmful effects of formation of algal blooms in an aquatic body.



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3. Explain the process of recombinant DNA technology.



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4. Define sewage. Explain the the two stages of treatment of sewage water.



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5. Briefly describe the various steps involved in plant breeding.



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1. What is menopause?



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2. What is lactational amenorrhoea?



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3. What is adaptive radiation?



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4. Mention the cells involved in Humoral Immunity.



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5. What are carcinogens? Mention any two groups of carcinogens with an example for each.



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6. Define Mortality.



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7. What is "Insertional inactivation " ?



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8. What is totipotency?



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9. (a) What is ecological succession?



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Part B

1. What is Apomixis? What is its importance?



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2. What are multiple alleles? Give an example.



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3. What is convergent evolution? Give an example.



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4. Mention any two measures to improve the quality and quantity of milk production.



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5. What are antigen presenting cells ? What is their importance ?



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6. What is commensalism? Give an example.



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7. What are hot sports ? Give an example.



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8. Define biodiversity. write three form of biodiversity.



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Part C

1. What kind of reproduction is seen in the following-organisms?

Penicillium, Chlamydomonas and sponges.



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2. Differentiate between microsporogenesis and megasporogenesis.



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3. Mention the advantages of selecting the pea plant for experiment, by Mendel.



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4. State Hardy-Weinberg equilibrium and mention the factors affecting the equilibrium of a population.



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5. List any three types of Innate Immunity barriers and give an example for each.



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6. Write a brief note on predation.



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7. With a neat labelled diagram explain the use of Electrostatic precipitator.



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8. Draw a neat labelled diagram of a typical Biogas plant.



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Part D

1. Write a neat labelled diagram of T.S of Anther.



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2. What is Spermatogenesis ? Explain the process of spermatogenesis.



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3. (a) What is Infertility ? Mention any four cause for infertility in man. (b) Mention any for objectives of RCHS programme.



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4. State Law of segregation. Explain Mendal's Monohybrid cross with a suitable experiment.



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5. Describe Lac operon concept with labelled sketch.



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6. (a) What is poultry? Mention two important components of Poultry Farm Management.

(b) Define Inter-specific hybridization?



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7. Briefly explain the steps involved in DNA finger printing?



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8. Write short notes on: (a) Restriction Endonucleases (b) Nematode resistance through RNA Interference Technique.



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9. Define sewage. Explain the the two stages of treatment of sewage water.



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10. Define ecological pyramid? Describe pyramid of energy flow with a example.



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11. Briefly describe the various steps involved in plant breeding.



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