BIOLOGY

BOOKS - SUPER COMPANION 5 IN 1

SUPER MODEL QUESTION PAPER 1

Part A

1. What is binary fission?

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2. What type of pollination is seen in cleistogamous flowers?

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3. Define Amphimixis.

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4. What is oligospermia?

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5. Mention the phenotypic ratio of a dihybrid cross.

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6. Define apiculture?

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7. Name any two antibiotics.

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8. What is molecular farming ?

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9. What are the stenothermal organisms ?

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10. Define Endemic species?

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Part B

1. What is vegetative propagation? Give two suitable examples.

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2. Mention the significance of fertilization.

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3. What is amniocentesis? Why is it banned?

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4. Write any four characters of Turner's syndrome?

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5. Mention 4 differences between RNA and DNA.

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6. What are coacervates? Give their importance in the origin of life.

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7. Write the major causes of biodiversity losses.

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8. How is biodiversity improtant for ecosystem functioning ?

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Part C

1. Write the difference between insitu and exsitu conservation:

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2. What are genetically modified organisms ? Name two factors on which their behaviour depends.

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3. Expand MOET with reference to animal breeding. Describe the process and use of it.

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4. Enlist the goals and applications of Human Genome project.

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5. Write short notes on analogous and homologous organs?

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6. What is contraception? Make a list of birth control measures and explain the application of any two of them.

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7. Draw a schematic representation of the phosphorous cycle.

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Part D Section I

1. Draw the T.S. of a mature anther and explain briefly.

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2. . Explain the Law of Dominance using a monohybrid cross.

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

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4. What are bio-geo chemical cycles? Explain carbon cycle?

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5. Briefly explain the process of Translation during protein synthesis?

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6. What was the experiment of Stanley Miller (1953) on the origin of life?

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Part D Section Ii

1. What is bio-magnifaction? Diagramatically represent the process of bio-magnifaction of DDT in an aquatic food chain.

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2. What are the causes for loss of biodiversity?

3. Define ecological pyramids and describe with examples the different types.

4. The diagram represents an anatropous ovule. Label its parts.

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5. Describe the process of spermatogenesis upto the formation of spermatids. Mention the fate of spermatids.

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Answer The Following Questions In One Word Or One Sentence Each

1. Describe Eutrophication.

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2. Name the causative organism of amoebiasis ?

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3. What is saltation?

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4. Define parthenogenesis.

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5. Mention the scientific term for the type of pollination which ensures Genetic recombination.

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6. Define trophic level?

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7. Why lipase are used in detergents?

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8. What are interferons?

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9. Name the source of Taq polymerase?

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10. Define spermiogenesis.

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Part B

1. Differentiate between oviparous and viviparous animals with a suitable example for each.

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2. Name a few methods of contraception.

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3. Mention any two application of DNA fingerprinting.

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4. Name the primary and secondary lymphoid organs.

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5. List any four hormones secreted by placenta.

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6. Differentiate between incomplete dominance and co-dominance.

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7. Discuss the role of fungi as biofertilizers.

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8. What are the advantages of tissue culture?

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Part C

1. Write the chromosomal compliment and symptoms of Turner's syndrome.

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2. RNA polymerases in eukaryotes show division of labour. Substantiate.

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3. 4. What are STDs? How can we prevent sexually transmitted diseases?

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4. Define : (i) Juvenile phase, (ii) Reproductive phase, (iii) Senescent phase.

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5. Draw a well labelled diagram of an antibody molecule.

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6. a) What is biochemical oxygen demand (BOD)?

b) Differentiate between primary sludge and activated sludge.

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7. List the characterstics of anemophilous flowers.

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8. Explain why trophical regions show greater levels of biodiversity.

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Part D

1. Draw a neat labelled diagram of human sperm.

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2. Expand MOET with reference to animal breeding. Describe the process and use of it.

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3. Describe the Semiconservative method of DNA replication.

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4. Draw a neat labelled diagram of an anatropous ovule and label its parts.

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

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6. Explain Mendel's dihybrid cross.

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7. Give the diagrammatic representation of Miller's experiment.

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8. What is gene therapy? Explain the types. Add a note on its applications?

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9. (a) What are plasmids ? (b) With the help of diagram explain the structure of plasmid P^{BR} 322.

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10. (a) What is jhum (slash and burn agriculture) cultivation ? How it accounts for deforestation. (b) What are the effects of ozone depletion ?

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11. What are bio-geo chemical cycles ? Explain Carbon Cycle ?