

## **BIOLOGY**

### **BOOKS - SUPER COMPANION 5 IN 1**

# ANNUAL EXAMINATION QUESTION PAPER -2015

Part A

1. What is Biomagnification?



2. Name a causative organism of pneumonia.



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**3.** Give an example for adaptive radiation.



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**4.** Define parthenogenesis.



5. Papaya plants exhibit xenogamy only. Why?



**6.** What is detritus?



7. Mention the use of Cyclosporin A.



**8.** Name the plant from which cocaine is obtained.



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**9.** Mention the technique used to separate DNA fragments in rDNA technology.



10. Why is oxytocin necessary for parturition?



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Part B

**1.** Differentiate between menstrual cycle and estrous cycle.



2. Mention any four sexually transmitted diseases.



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3. tRNA is an adaptor molecule. Comment



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**4.** Distinguish between Benign tumour and Malignant tumour.



**5.** List any four hormones secreted by placenta.



**6.** What are the conclusions drawn by T.H. Morgan from the crossing experiment in Drosophila with respect to linkage?



7. Discuss the role of fungi as biofertilizers.



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8. Write a note on single cell protein.





**1.** What is aneuploidy? Write any four symptoms of Down's syndrome.



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



**3.** Suggest any three assisted reproductive technologies to overcome infertility.



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**4.** Name asexual reproductive structures in (1)

Hydra (ii) Chlamydomonas (iii) Penicillium.



**5.** Mention three types of Innate barriers of defence with an example each.



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**6.** (a) What is endemism?



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**7.** (b) Mention 'The Evil Quartet' of biodiversity loss.



8. How is pollination achieved in vallisneria and sea grasses?



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### Part D Section I

1. Draw a neat labelled diagram of sectional view of human female reproductive system.



- **2.** (a) Write the steps involved in multiple ovulation and embryo transfer.
- (b) Differentiate between outcrossing and cross breeding.



**3.** Describe the Semiconservative method of DNA replication.



**4.** Explain the transverse section of young anther with a labelled diagram.



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**5.** Explain Brood parasitism and sexual deceit' as an interaction of species with an example each.



#### Part D Section li

**1.** Draw a labelled diagram of diagrammatic representation of Miller's experiment.



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**2.** One of the applications of biotechnology is the production of insect resistant crop plants."

Justify the statement with reference to Bt-cotton.



3. Explain the features of cloning vectors.



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**4.** (a) What are the effects of ozone depletion?

(B)BOD is an index of water pollution.

Comment.



**5.** (a) What is ecological succession?



**6.** (b) Represent an ideal pyramid of numbers in a grassland ecosystem.



**7.** (c) Name the two types of nutrient cycles with an example each.

