



BIOLOGY

BOOKS - SRIJAN BIOLOGY (ENGLISH)

SELF ASSESSMENT PAPER-1

Part I

1. What is colostrum? How is milk production hormonally regulated?



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2. Define test cross.



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3. Mention of the role of Azospirillum as biofertilizer



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4. Define diapause



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5. What is interferon?



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6. What do you mean by linkage?



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7. What is the significance of LH surge through the menstrual cycle?



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8. Explain the chromosomal theory of inheritance



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9. Which of the following is a post-fertilisation event in flowering plants

A. Transfer of pollen grains

B. Embryo development

C. Formation of flower

D. Formation of pollen grains

Answer:



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10. Person having genotype $I^A I^B$ would show the blood group as AB. Thus is because of

A. Pleiotropy

B. Co-dominance

C. Segregation

D. Incomplete dominance

Answer:



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11. Cry genes or Bt genes are obtained from:

A. Cotton pest

B. Tobacco

C. *Bacillus thuringiensis*

D. *E.coli*

Answer:



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12. The substance produced by a cell in viral infection that can protect other cells from further infection is

A. Serotonin

B. Colostrum

C. Interferon

D. Histamine

Answer:



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13. Expand the following abbreviations:

(i) VNTR (ii) HGP (iii) SNP (iv) EST



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14. Define the following

(i) Allergy (ii) Gene therapy



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15. Give reasons:

Cell division is a mode of reproduction



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16. Why green plants are not found a certain depth in the ocean ?



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1. Define spermiogenesis.



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2. What forms the corpus luteum and at what stage? Name two hormones secreted by it.



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3. Explain with an example what is incomplete dominance. Which trait in such a case has no

gene?



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4. How can bacterial DNA be released from the bacterial cell for biotechnology experiments ?



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5. Distinguish between endemic species and threatened species



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6. What would happen to immune system, if thymus gland is removed from the body of a person?



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7. What are the advantages of recombinant insulin ?



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8. What is the difference between ectotherms and endotherms?



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9. What is a zero population growth rate?



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1. What are the functions of placenta other than its endocrine function?



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2. Describe the hormonal control of spermatogenesis in humans.



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3. Why is breast feeding recommended during the initial period of an infant's growth? Give reasons.



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4. Predation is usually referred to as detrimental association. State any three positive roles that a predator plays in an ecosystem.



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5. What is biodiversity? Mention the implications of the loss of biodiversity



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6. Name the components of lac operon and discuss their role



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7. Explain the role of DNA polymerase present in E.coli.



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8. Draw a labelled diagram of a section of an enlarged view of microsporangium of an angiosperm.



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9. Draw a labelled diagram of I.S of an embryo of grass



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Part II Section C

1. What are cloning vectors. Give two examples



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2. (i) Describe the characteristics a cloning vector must possess. (ii) Why DNA cannot pass through the cell membrane ? Explain. How is a bacterial cell made competent to take up recombinant DNA from the medium?



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3. Explain why Bt cotton flowers undergo pollination by butterflies and bees inspite of being insect pest resistant?





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4. How "Rosie" considered different from a normal cow?



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5. Mention the primary aim of the 'Assisted Reproductive Technology' (ART) programme. Briefly explain IVF, GIFT and ZIFT



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6. Write short notes on

MTP,



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7. What is the advantage of Saheli ? Who prepared Saheli?



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8. How is a probe used in molecular diagnostics?



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9. How would you find genotype of a tall pea plant bearing white flowers ? Explain with the help of a cross. Name the type of cross you would use.



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10. Name the major types of RNAs and explain their role in the process of protein synthesis in prokaryotes



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11. How do the tRNA molecules appear in
Two dimensional, and



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12. How do the tRNA molecules appear in

Three dimensional views?



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