



# BIOLOGY

## BOOKS - SRIJAN BIOLOGY (ENGLISH)

### BIOLOGY-2016

#### Part I

1. Give a brief answer for each of the following:

What is central dogma ?



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2. Give a brief answer for each of the following:

Define cryopreservation.



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3. Give a brief answer for the following:

What is symbiosis ?



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4. Give a brief answer for each of the following:

Explain the term perianth



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5. The curve showing the amount of light absorbed at each wavelength is:

A. Action spectrum

B. Absorption spectrum

C. Quantum yield

D. Quantum requirement

**Answer:**



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6. After fertilisation, the integuments of an ovule develop into :

A. Seed

B. Seed coat

C. Fruit

D. Fruit wall

**Answer:**



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**7. Meselson and Stahl's Experiment proved:**

A. Transduction

B. Transformation

C. Transformation

## D. Semi-conservative DNA replication

**Answer:**



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**8.** The act of expelling the full term foetus from the uterus is termed as:

A. Gestation

B. Implantation

C. Parturition

## D. Capacitation

**Answer:**



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9. Give scientific terms for each of the following:

The smallest unit of DNA which can mutate.



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**10.** Give scientific terms for each of the following:

Type of water absorption by roots where metabolic energy is required.



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**11.** Give biological/technical term for the following

Statistical study of human population.



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**12.** Give scientific term for multiple effects of a gene on the phenotype of an organism.



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**13.** Expand the following abbreviations :

rDT



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**14.** Expand the following abbreviations :

BAC



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**15.** Expand the following abbreviations :

SSBP



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**16.** Expand IUCD.



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**17.** Name the scientists who have contributed to the following:

Reverse transcription



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**18.** Name the scientists who have contributed to the following:

Photorespiration





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**19.** Name the scientists who have contributed to the following:

Principle of limiting factors



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**20.** Name the scientists who have contributed to the following:

Photolysis of water



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## Part II Section A

1. Mention three features of the Neanderthal Man.



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2. Differentiate between connecting link and missing link.



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3. What is adaptive radiation?



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4. Give an account of Lederberg's replica plating experiment to show the genetic basis of evolution.



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**5. Assertion:** Frog has a fish-like tadpole larva in its life history

**Reason:** Ontogeny repeats phylogeny.



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**6. What is founder effect?**



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7. Give one significant difference between living beings and non-living objects



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8. Mention one cause for variation in nature.



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9. What is the difference between the teeth of apes and the teeth of man?





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## Part II Section B

1. Give a graphic representation of the  $C_3$  cycle.



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2. Explain secondary growth in roots of dicot plants.



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3. State two advantages of vegetative propagation.



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4. Mention the role of hormones during the menstrual cycle.



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5. Give any four adaptations of anemophilous flowers.



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6. Differentiate between Soft wood and hard wood



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7. Chemiosmotic theory of ATP synthesis in chloroplast & mitochondria is based on



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**8.** Draw a neat labelled diagram of the vertical section of a monocot leaf.



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**9.** Mention any four functions of placenta.



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1. Explain the process of sex determination in honeybees.



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2. Define complete linkage. Give an example of a cross showing complete linkage.



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3. Write a short note on multiple ovulation embryo transfer technology.



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4. Give an account of artificial chromosomes in transfer of genetic material.



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5. Mention any four methods involved in the treatment of cancer.



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6. Explain the process of RNA interference.



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7. Name the genus to which baculoviruses belong. Describe their role in the integrated pest management programmes.



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8. Explain the structure of a typical antibody molecule.



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9. Why are bio-fertilisers preferred over chemical fertilisers?



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