



# BIOLOGY

## BOOKS - SRIJAN BIOLOGY (ENGLISH)

### SAMPLE PAPER 2018

#### Part I

1. Give a significant point of difference between Oestrous and Menstrual cycle.



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2. Give the biological name of the organism causing typhoid.



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3. If the haploid number of chromosomes in a plant species is 20, how many chromosomes will be present in the cells of the shoot tip?



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4. Name a plant which flowers every twelve years.



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5. Name the diagnostic test for AIDS.



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6. Name the terminal stage of ageing in the life cycle of plants.





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7. Which organisms constitute the last trophic level ?



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8. What is emasculation?



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9. Length of the DNA with 23 base pairs is:

A. 78.4 Å

B. 78.2 Å

C. 78 Å

D. 74.8 Å

**Answer: B**



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10. Opium is obtained from :

A. *Papaver somniferum*

B. *Cannabis sativa*

C. *Erythroxylum coca*

D. *Datura metel*

**Answer: a**



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**11.** According to Abiogenesis, life originated from:

- A. Non-living matter
- B. Pre-existing life
- C. Oxygen
- D. Extra-terrestrial matter

**Answer: a**



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12. The largest unit in which gene flow is possible is :

A. Organism

B. Population

C. Species

D. Genes

**Answer: C**



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**13.** Give one significant contribution of the following scientist :

P. Maheshwari



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**14.** Give one significant contribution of the following scientist:

E. Wilson



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**15.** Give one significant contribution of the following scientist :

M. S. Swaminathan



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**16.** Give one significant contribution of each of the following scientists :

H. Boyer



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**17.** Define biopatent.



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**18.** Explain the following terms:

Parthenocarpy



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**19.** Give a reason for each of the following :

Pollen grains of wind pollinated flowers are produced in large quantities.



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**20.** Give a reason for each of the following :

Equilibrium of a forest ecosystem can be disturbed by uncontrolled hunting of big predators.



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**Part II Section A**

1. A woman with blood group O married a man with blood group AB. Show the possible blood groups of the progeny. List the alleles involved in this inheritance



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2. If the mother is a carrier of colour blindness and the father is normal, show the possible genotype and phenotype of the offspring of

the next generation, with the help of a punnet square.



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**3.** Define life span. Give the life span of an elephant.



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**4.** Give two characteristic features of each of the following:

# Ramapithecus



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5. Give two characteristic features of each of the following:

Cro-Magnon man



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6. What is the effect of global warming on the earth.



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7. Suggest some methods for control of noise pollution



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8. Define BOD. What is its significance in an aquatic ecosystem?



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**9.** Give one significant difference between the following pair: Humoral immunity and cell mediated immunity



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**10.** Give one significant difference between the following pair:

Benign tumour and malignant tumour



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11. Write a brief note on the causes of infertility.



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## Part II Section B

1. Draw a labelled diagram of L.S. of human testis.



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2. Draw a labelled diagram of the mature embryo sac of angiosperms.




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3. Explain gene therapy, with reference to treatment of SCID.



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4. Study the table given below. Do not copy the table, but write the answers in the correct order. 



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5. Explain industrial melanism.



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6. Describe the tissue culture technique in plants.



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7. Define the following:

Spermiogenesis



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**8. Define the following:**

Reproductive health



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**9. Define the following:**

Amenorrhea



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**10. Define the following:**

Hotspots



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**11. Define the following:**

Ramsar Sites



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**12. Define the following:**

Red data book



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**13. Define the following:**

Biodiversity



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**14.** Define the following:

Eutrophication



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**15.** Define the following:

PAR



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1. Describe post transcriptional processing of RNA in eukaryotes.



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2. Describe Avery, McLeod and McCarty's experiment. State its significance.



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3. Write a short note on Chipko Movement.





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4. Write a short note on Joint Forest Management.



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5. What does PCR stand for ? Describe the different steps of PCR.



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6. Give an account of the Blue-White Method of selection of recombinants



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