



# BIOLOGY

## BOOKS - SRIJAN BIOLOGY (ENGLISH)

### SELF ASSESSMENT PAPER 07

#### Part I

1. Explain why meiosis and gametogenesis are always interlinked.



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2. How many bases code for one amino acid?



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3. Give an example of a microbe that is used in statin production.



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4. A non-communicable disease is



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5. What are recombinant proteins? How do bioreactors help in their production?



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6. Define biopatent.



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7. Name the interaction that exists between sucker fish and shark.



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8. Define: Double fertilisation



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9. Seeds may be:

A. Endospermic

B. Non-endospermic

C. Ectospermic

D. Both (1) and (2).

**Answer:**



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**10.** Determination of skin colour is an example of:  
of:

A. Co-dominance

B. Polygenic inheritance

C. Incomplete dominance

D. Pleiotropy

**Answer:**



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**11.** The organisms which cause diseases in plants and animals are called

A. Pathogens

B. Vectors

C. Insects

D. Worms

**Answer:**



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**12.** How many autosomes does a human primary spermatocyte have?

A. 34

B. 44

C. 54

D. 33

**Answer:**



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**13. Expand the following:**

MMR





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**14.** Expand the following:

IMR



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**15.** Expand the following:

ZPG



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**16.** Expand the following:

RCH



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**17.** Define the following:

Parthenogenesis



**Watch Video Solution**

**18.** Define the following:

Introns



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**19.** Give reasons:

Retrovirus is considered to be an exception to the central dogma.



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**20.** Give reasons:

Restriction enzymes are considered as a type of endonucleases.



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**21.** Explain why meiosis and gametogenesis are always interlinked.



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22. How many bases code for one amino acid?



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23. Give an example of a microbe that is used in statin production.



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24. What are non communicable disease?



[Watch Video Solution](#)

**25.** What are recombinant proteins? How do bioreactors help in their production?



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**26.** Define biopatent.



**Watch Video Solution**

**27.** Name the interaction that exists between sucker fish and shark.



**Watch Video Solution**

**28.** Double fertilization is



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**29.** Seeds may be:

A. Endospermic

B. Non-endospermic

C. Ectospermic

D. Both (1) and (2).

**Answer:**



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**30.** Determination of skin colour is an example of:  
of:



A. Co-dominance

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**31.** The organisms which cause diseases in plants and animals are called

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**32.** How many autosomes does a human primary spermatocyte have?

A. 34

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## Part II Section A

**1.** What are the four phases of life?



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2. How do plants produce seeds through apomixis? Explain with the help of an example.



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3. a) Differentiate between dominance and co-dominance.

b) Explain co-dominance taking an example of human blood groups in the population.



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4. What is the role of the Histamine in the body's defence against infections?



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5. Explain briefly the evil quartet of biodiversity loss in the ecosystem?



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6. State the role of endothecium.



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7. What are the characteristics of the chromosome theory of inheritance?



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8. Explain the process of translation.



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9. Explain the process of transcription.



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**10.** What are the three major phases in the life cycle of an organism? Define each phase.



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**11.** How do plants produce seeds through apomixis? Explain with the help of an example.



[Watch Video Solution](#)

**12.** Differentiate between Codominance and Incomplete dominance



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**13.** What is the role of histamine in inflammatory response? Name a few drugs which reduce symptoms of allergy?



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**14.** Explain briefly the evil quartet of biodiversity loss in the ecosystem?



**Watch Video Solution**

**15.** State the role of endometrium.



**Watch Video Solution**

**16.** What are the characteristics of the chromosome theory of inheritance?



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1. Write two major functions each of testis and ovary.



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



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**3.** What is basic principle of vaccination? How do vaccines prevent microbial infections? Name the organisms from which hepatitis B vaccine is produced.



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**4.** State four causes and four consequences of population growth.



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5. Many Plants and animal species are on the verge of their extinction because of loss of forest land by indiscriminate use by the humans. As biology student what method would you suggest along with its advantages that can protect such threatened species from getting extinct.



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6. What would happen if a plasmid without a selectable marker was chosen as a cloning

vector?



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7. How does over exploitation of beneficial species affect biodiversity ? Explain with the help of one example.



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8. Draw a well labelled diagram to show various stages of fertilization.



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**9.** Draw the well labelled diagram of a mature human sperm and label its parts.



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1. How is transgenic tobacco plant protected against *Meloidogyne incognita*?



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2. Explain why Bt cotton flowers undergo pollination by butterflies and bees in spite of being insect pest resistant?



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3. Explain the basis on which the gel electrophoresis technique works. Write any two ways the products obtained through this technique can be utilized.



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4. What is the role of primer in PCR?



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5. What is transcription. Explain it with the help of a diagram.



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6. Briefly describe the technique employed in DNA fingerprinting



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7. Differentiate between commensalism and mutualism by taking one example each from plants only.



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8. A couple with normal vision bear a colour blind child work out a cross to show how it is possible and mention the sex of the affected child .x



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**9.** Explain the process of sex determination in honeybees.



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**10.** How is transgenic tobacco plant protected against *Meloidogyne incognita*?



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