



BIOLOGY

BOOKS - SRIJAN BIOLOGY (ENGLISH)

SELF ASSESSMENT PAPER-4

Part I

1. Where are the Leydig cells present?



Watch Video Solution

2. What is Punnett square used for ?



[Watch Video Solution](#)

3. What is mucosal associated lymphoid tissue?



[Watch Video Solution](#)

4. What is biolistics or gene gun?



[Watch Video Solution](#)

5. What is frugivorous?



[Watch Video Solution](#)

6. What is emigration



[Watch Video Solution](#)

7. What is Biopiracy ?



[Watch Video Solution](#)

8. Name the bacteria found in sludge of sewage treatment.



[Watch Video Solution](#)

9. Control of gene expression takes place at the level of

A. DNA replication

B. Transcription

C. Translation

D. None of the above

Answer:



Watch Video Solution

10. Golden rice is a transgenic crop of the future with which of the following improved trait?

A. Insect resistance

B. High protein content

C. High vitamin A content

D. High lysine content

Answer:



Watch Video Solution

11. Functional megaspore in an angiosperm develops into

A. Endosperm

B. Embryo

C. Embryo-sac

D. Ovule

Answer:



Watch Video Solution

12. Hershey & Chase experiment was based on the principle:

A. Transformation

B. Translation

C. Transduction

D. Transcription

Answer:



Watch Video Solution

13. Give one significant contribution of each of the following scientists:

(i) Alec Jeffrey (ii) Har Gobind Khurana (iii)

George Gamow (iv) Francis Crick



[Watch Video Solution](#)

14. Define the following:

(i) Antigens (ii) Morphogenesis



[Watch Video Solution](#)

15. Give reasons:

Herbivores are considered similar to predators in the ecological context



[Watch Video Solution](#)

16. Justify with the help of an example where a deliberate attempt by humans has led to the extinction of a particular species.



Watch Video Solution

Part II Section A

1. Meiotic division during oogenesis is different from that in spermatogenesis. Explain how and why?



[Watch Video Solution](#)

2. What is menstrual cycle? Which hormones regulate menstrual cycle?



[Watch Video Solution](#)

3. Tallness of a pea plant is a dominant trait, while dwarfness is the alternate recessive trait. When a pure line tall is crossed with pure line

dwarf, what fraction of tall plants in F_2 shall be heterozygous. Give reasons.



Watch Video Solution

4. Mention of causative agent and the preventive measures for each of the following

(i) Dengue (ii) Amoebiasis



Watch Video Solution

5. How was the penicillin discovered?



[Watch Video Solution](#)

6. What is meant by 'alien species' invasion?

Name one plant and one animal alien species that are a threat to our Indian native species.



[Watch Video Solution](#)

7. List the unit of the density of population in a habitat per unit area

(a) Bacteria (b) Banyan (c) Deer (d) Fish





[Watch Video Solution](#)

8. State the use of Nuclear Polyhedrosis Virus



[Watch Video Solution](#)

9. What is the significance of antibiotics in medicine?



[Watch Video Solution](#)

1. Who was given the first gene therapy ?

When was it done?



Watch Video Solution

2. How is a foreign DNA introduced in a host maintained by a host and transferred to the successive generation?



Watch Video Solution

3. Explain the steps that ensure cross pollination in an autogamous flower



[Watch Video Solution](#)

4. What is allergy ? Name the antibody responsible for it. Also, mention the two chemicals released from the mast cells during an allergic reaction.



[Watch Video Solution](#)

5. Why Western Ghats in India have been declared as biological hot-spots?



Watch Video Solution

6. Write six salient features of genetic code



Watch Video Solution

7. Describe rivet popper hypothesis



Watch Video Solution

8. The generative cell of a two-celled pollen divides in the pollen tube but not in a three celled. Give reasons.



[Watch Video Solution](#)

9. Embryo sacs of some apomitic species appear normal but contain diploid cells. Suggest a suitable explanation for the condition.



[Watch Video Solution](#)

Part II Section C

1. What is RNA interferences ? Describe how nematode resistant transgenic plants have been produced.



[Watch Video Solution](#)

2. Write the role of 'Ori' and 'restriction' site in a cloning vector pBR322.



[Watch Video Solution](#)

3. How is the amplification of a gene (sample of interest) carried out using Polymerase Chain Reaction (PCR)



[Watch Video Solution](#)

4. Explain various special techniques used in assisted reproductive technologies



[Watch Video Solution](#)

5. Enlist the different methods of contraception. Write short note on any two of the methods mentioned by you.



[Watch Video Solution](#)

6. If a father and son are both defective in red-green colour vision, is it likely that the son inherited the trait from his father? Comment.



[Watch Video Solution](#)

7. Explain the structure of RNA with the help of a well labelled diagram. Describe its role in the process of translation.



Watch Video Solution