

CBSE Board
Class XII Biology
Sample Paper – 9

Time: 3 Hours**Total Marks: 70**

General Instructions:

1. All questions are compulsory.
 2. This question paper consists of four Sections A, B C and D. Section **A** contains **8** questions of **one** mark each, Section **B** is of **10** questions of **two** marks each, Section **C** is of **9** questions of **three** marks each, and Section **D** is of **3** questions of **five** marks each.
 3. There is no overall choice. However an internal choice has been provided in **one** question of **2** marks, **one** question of **3** marks and all the **three** questions of **5** marks weight age. A student has to attempt only one of the alternatives in such questions.
 4. Wherever necessary, the diagrams drawn should be neat and properly labelled.
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Section A

- Q1. What is allogamy? [1]
- Q2. Name the site on t-RNA which recognizes and complements the code carried by m-RNA. [1]
- Q3. What is Atlas 66? [1]
- Q4. Why does Indian Government set up GAEC? [1]
- Q5. Name the gene which is coded for Bt toxin produced by Bacillus. [1]
- Q6. What is electroporation? [1]
- Q7. Name any two major ecosystems of the world. [1]
- Q8. What is meant by pyramid of biomass? [1]

Section B

- Q9. How would it affect the fertilization when the acrosome of a mammalian sperm does not function normally? [2]
- Q10. How is sex determined in honeybees? [2]
- Q11. If a double stranded DNA has 20 percent of cytosine, calculate the percentage of adenine in the DNA. [2]

- Q12. Why Urey and Miller did not use oxygen as one of the gases in their experiments? [2]
- Q13. Differentiate between DNA and RNA. [2]
- Q14. *Bacillus thuringiensis* produce insecticidal protein. Why does this toxin not kill the *Bacillus*? [2]
- Q15. Write a short note on adaptations of plants to water scarcity. [2]
- Q16. What is the difference between a food chain and a food web? [2]
- Q17. What are the ill effects of algal bloom? [2]
- Q18. Expand each one to its full form: [2]
- (i) MALT
- (ii) NACO

Or

How can we prevent the disease – taeniasis?

Section C

- Q19. Define external fertilization. Mention its disadvantages. [3]
- Q20. The first half of the menstrual cycle is called the proliferative phase as well as the follicular phase. Explain. [3]
- Q21. Describe the nature of inheritance of ABO types of blood groups in humans. In which way does this inheritance differ from that of the plants in garden pea. [3]
- Q22. A child is born having XXY chromosomes. What will be its sex? Mention any three such symptoms of this condition that may develop in such a child when he grows into adult. [3]
- Q23. Suggest three early diagnostic symptoms or danger signals of cancer. [3]
- Q24. What are the achievements of green revolution in our country in the field of agricultural production? [3]

Q25. Besides better aeration and mixing properties, what other advantages do stirred bioreactors have over shake flasks? [3]

Q26. Write any three factors which control the size of population. [3]

Q27. (a) What are the criteria for determining a hot spot? [3]

(b) Name the two most biodiversity rich zones of India.

Or

How does food chain get shortened and affect the biosphere?

Section D

Q28. Describe briefly some important adaptations that promote cross pollination in angiosperms. [5]

Or

Describe briefly the structure of human ovum.

Q29. What are the essential requirements of the genetic material? [5]

Or

How did DDT become ineffective against mosquitoes?

Q30. Ram is managing a dairy farm. He has been advised to use artificial insemination to overcome several problems in developing better breeds of cow. Govind has advised him MOET for herd improvement. Ram is ignorant and is not able to decide. How will you help Ram regarding [5]

(i) Which technique should he adopt?

(ii) Procedure of new technique

(iii) What is advantage of this technique?

(iv) What values are reflected in it?