



# Guru Aanklan

**Grand  
Test**

**HSC Examination  
Biology Code - Set - A**

**Marks : 70  
Time : 3 Hours**

### SECTION - A

[A] Answer the following questions : (One mark each) [1 × 8 = 8]

1. Which of the following is the smallest RNA?  
(A) t-RNA                      (B) m-RNA                      (C) r-RNA                      (D) ds-RNA
2. In bisexual flowers, maturation of gynoecium before androecium is known as \_\_\_\_\_.  
(A) protandry                      (B) protogyny                      (C) gynandry                      (D) dicliny
3. Which is the second cranial nerve?  
(A) Olfactory                      (B) Pathetic                      (C) Optic                      (D) Facial
4. The best silk is produced by  
(A) Bombyx mori                      (B) tussar                      (C) Eri                      (D) Muga
5. Define Leaching.
6. Who isolated restriction endonucleases for the first time?
7. What is cryptorchidism?
8. 'Charas' is derived from which plant?

### SECTION - B

[B] Answer the following questions : (Two marks each) [2 × 10 = 20]

9. Explain why the pyramid of biomass in the sea is inverted.
10. What is splicing? Why is splicing necessary in eukaryotic genes?
11. Explain the structure of ribosome.
12. Enlist seven traits in pea selected by Mendel?
13. Write a note on microbes in sewage treatment.
14. Define Transgenic animals and mention any two uses of transgenic animals
15. Explain the technique of multiple ovulation embryo transfer (MOET) in animal breeding.
16. Define commensalism and give any two examples.
17. Write a short note on Guanotelism.

**OR**

17. Write the composition of urine.
18. Draw a neat labelled diagram of a biogas plant.

### SECTION - C

[C] Answer the following questions : (Three marks each) [3 × 9 = 27]

19. Explain natural vegetative propagation through leaves giving example.
20. State and explain Mendel's second law of inheritance.
21. Describe the important biological tools used in recombinant DNA technology.
22. Describe different steps involved in tissue culture technique.
23. Write a note on crossing over.
24. Why *Australopithecus* is considered as connecting link between ape and man ?
25. Describe in brief 'Turner's syndrome'.
26. Write a note on Ringworm with reference to the following points:  
Definition / Causative agents / Signs and symptoms / Treatment and preventive measures.
27. Write in detail about Blood pressure and Hypertension

OR

27. Define what is 'Atherosclerosis' and write in detail about pacemaker

**SECTION - D**

[D] Answer the following questions : (Five marks each) [5 × 3 = 15]

28. What is 'photorespiration'? Explain it with diagrammatic representation.

OR

28. Describe C<sub>4</sub> pathway with examples.
29. Describe the structure of Human eye with mechanisms.

OR

29. Write in detail about Adrenal gland.
30. Explain in detail sexually transmitted diseases?
  - i. Syphilis
  - ii. Gonorrhoea

OR

30. Describe the birth control measures.