



**Instruction :-**

- i) Draw Diagrams wherever necessary.
- ii) Answer the extra question separately.

**I Answer the following in one word or in one sentence.**

**10 x 1 = 10**

1. What is bio conversion?
2. Explain EFB.
3. What are flocs?
4. Define Apomixis.
5. What is Dobson's unit.
6. What are hot spots?
7. What is Feminism?
8. Which are the earliest fossils of prehistoric man?
9. Name the technique used to determine chromosomal or metabolic disorders in foetus.
10. What is vaccination?

**PART - B**

**II. Answer (any five) of the following.**

**[5 x 2 = 10]**

11. a) What is meant by the term 'breed'? **[1]**  
b) What are the objectives of animal breeding ( any 2)? **[1]**
12. Differentiate active and passive immunity.
13. Define external fertilization. Mention (any 2) disadvantages.
14. What is the role of T<sub>1</sub> plasmids in biotechnology.
15. Mention any four main functions of an ecosystem.
16. Differentiate homozygote from heterozygote.
17. Draw a heat labeled diagram of transcription unit.
18. Write any four components of dairy farm management process.

**PART - C**

**III. Answer (any Five) of the following.**

**5 x 3 = 15**

19. Define the following.  
a) Commensalism    b) Ammensalism    c) Mutualism.
20. Write a short note on productivity?
21. a) Suggest any three assisted reproductive technologies to overcome infertility **[1 ½ ]**  
b) Mention two surgical methods to prevent fertilization in human. **[1 ½ ]**

22. Draw a neat labeled diagram of the nucleosome model of DNA.
23. Explain August Weismann's theory.
24. a) List out any four effects of drug abuse. [2]  
b) What are hallucinogens? Give an example. [½]
25. Name the asexual reproductive structures is  
1) Hydra 2) Sponges 3) Agave 4) Water hyacinth 5) Ginger 6) Penicillium.
26. Define Biodiversity conservation and add a note on its types.

**PART - D<sub>1</sub>**

- IV. Answer (any four) of the following. 4 x 5 = 20**
27. a) Draw a neat labeled diagram of human sperm. [4]  
b) What is semen? [1]
28. What are the major steps involved in plant breeding?
29. Explain the Watson and crick's model of DNA.
30. Explain the structure of eukaryotic gene.
31. With help of neat labelled diagram explain Stanley miller's experiment
32. Define transgenic animals. Explain any four areas where they can be utilized.

**PART- D<sub>2</sub>**

- V. Answer (any three) of the following. 3 x 5 = 15**
33. Describe the process of decomposition of detritus.
34. Describe the sewage treatment plant.
35. Draw a neat labelled diagram of human male reproductive system.
36. How does primary succession start in water and lead to climax community?
37. a) What is Deforestation? [1]  
b) What are the cause of deforestation? [2]  
c) Write a case study of people's Participation in conservation of forests. [2]

\*\*\*\*\*