



JAIN COLLEGE, v v puram
For Reduced Syllabus

Test / Exam: Mock -2	Month & Year: 2020-2021
Class: II PUC	Subject: Biology
Duration: 3:15 hours	Max. Marks: 70

GENERAL INSTRUCTIONS:

***The question paper consists of four parts A, B, C &D**

***All parts are compulsory**

***Draw diagrams wherever necessary. Unlabeled diagrams or illustrations do not attract any marks.**

PART-A

Answer the following questions in one word or one sentence each: 1x10=10

1. Define spermiation.
2. “Wind pollinated flowers have to produce enormous amount of pollen. Why?”
3. Which one change is the cause of sickle cell anemia?
4. Write the causative organism that causes Elephantiasis?
5. Define Parthenogenesis.
6. What is the medical use of cyclosporin A?
7. Write the scientific name of nematode that attacks the root of tobacco plant?
8. Name any one disease for which gene therapy has been proved effective.
9. Expand IUCN?
10. Write the equation for representing logistic growth curve.

PART-B

Answer any five of the following questions in 3-5 sentences each wherever applicable

2x5=10

11. Enlist any four functions of the placenta
12. What is emasculation? Why is it practiced in Artificial hybridization
13. Differentiate between estrus and menstrual cycle
14. Mention any four important characteristics of genetic code?
15. What are multiple alleles? Give an example
16. Differentiate between the two different types of tumors.

17. What are selectable markers? What is their use in genetic engineering.
18. What are sacred grooves? What is their role in conservation.

PART-C

Answer any five of the following questions in 100-150 words each: 3x5=15

19. With the help of a neat labelled diagram of the structure of an antibody molecule.
20. Draw a neat labelled diagram of structure of pollen grains and explain
21. Write one function for each i) LH ii) FSH iii) Progesterone.
22. What is MTP? When is it advised and is it legally banned in our country?
23. Diagrammatically represents PBR 322?
24. Mention the important tools required for genetic engineering technology?
25. A tRNA is charged with amino acid methionine.
a) Give the anticodon of this tRNA?
b) What is the mRNA coding for methionine?
c) Name the enzyme responsible for this binding
26. Give the scientific name of the source plant for coca alkaloid. Mention its effects on body

PART ---D

SECTION –I

Answer any four of the following questions in 200-300 words each wherever applicable: 5x4=20

27. Draw a neat labelled diagram of structure (T.S) of microsporangium
28. Explain dihybrid cross with a schematic representation using punnet square.
29. Draw a neat labelled diagram of the female reproductive system.
30. Define replication? Describe semiconservative mode of DNA replication with the help of a neat labelled diagram.
31. Sketch the diagrammatic representation of replication of retrovirus inside an animal cell and describe briefly.
32. Draw a neat labelled diagram of stirred tank bioreactor.

SECTION---II

Answer any three of the following questions in 200-250 words each: 5x3=15

33. Describe the various outbreeding devices in plants.
34. What is infertility? Explain the methods to assist infertile couples to have children?
35. Describe the role of microbes as biofertilizers.
36. What are abiotic factors? Describe the role of any four abiotic factors in a given habitat?

37. Explain in situ and ex situ conservation as a strategy for the conservation of biodiversity with examples