



JAIN COLLEGE

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Rajarajeshwari Nagar, Bangalore - 560 098

SUBJECT: BIOLOGY

**II PUC
MOCK - II**

Timings Allowed: 3 Hrs 15 Minutes

Total Marks: 70

Instructions:-

- 1. This question paper consists of four parts A, B, C & D. Part D consists of two sections – Section I & Section II**
- 2. All the parts are compulsory.**
- 3. Draw diagrams wherever necessary. Unlabelled diagrams or illustrations do not attract any marks**

Part-A

I Answer the following questions in one word or in one sentence each:-

10X1=10

1. Name two organisms in which multiple fission occurs.
2. What is central dogma of molecular biology?
3. Define ecological pyramid.
4. What is brewing? Which microbe is genetically used for that?
5. What is reforestation?
6. Define convergent evolution?
7. What is a electrophoresis?
8. Give the equation for species area relationship.
9. What is testcross?
10. What is polymerase chain reaction?

Part-B

II Answer any five of the following questions in 3 to 5 sentences each wherever applicable. 5X2=10

11. What are vegetative propagules? Give two examples.
12. Define capacitation and fertilisation cone.
13. Why is colour blindness called X-linked inheritance?
14. Mention any two applications of DNA finger printing.
15. Mention the stages in human evolution in order of their origin.
16. List the differences between antigen and antibody.
17. What are bio fertilizers? Give example of any two free living nitrogen fixing micro organisms.
18. What is population? How is it differs from a community?

Part-C

III Answer any five of the following questions in about 40-80 words each, wherever applicable.

3X5=15

19. Differentiate between micro sporogenesis and mega sporogenesis.
20. Explain the experiment of Griffith to prove the transforming principle of bacteria streptococcus pneumonia.
21. Explain the role of microbes in sewage water treatment.
22. Define cancer? Mention the causes and treatment of cancer.
23. Mention the pathogen, mode of transmission and any two symptoms of typhoid.
24. Define ecological succession? Add a note on hydrarch succession.
25. What are coacervates? give their importance in the origin of life.
26. List any three types of innate immunity barriers and give an example for each.

Part - D

IV Answer any 4 of the following in about 200 to 250 words.

4X5=20

27. a) List the three reasons for population explosion.
b) Name human male and female sterilization procedures.
28. Explain the morphological and physiological adaptations in animals in response to stressful habitat
29. What is single cell protein? Explain the micro used for SCP and their importance.
30. What is Neo Darwinism? What are its advantages over Darwinism?
31. Explain the agents of pollination with suitable example.
32. What is incomplete dominance? Explain with an example.
33. Describe post fertilization changes in flowers.
34. What is gene therapy? Explain the steps involved in gene therapy for ADA deficiency.

Part-E

V Answer any three.

5X3=15

35. Explain different stages of embryo development in dicot with the help of diagram.
36. What is mono hybrid cross? Explain the inheritance of one gene taking height of plant as a trait in *pisum sativum* work out the cross upto F₂ generation.
37. Explain any three prevention and control measures of drug and alcohol abuse.
38. With a labelled diagram explain the functioning of electro static precipitator.
39. Write a brief note on HGP(Human Genome Project).
