SRI BHAGAWAN MAHAVEER JAIN COLLEGE
Vishweshwarapuram, Bangalore 560004
Mock Examination Question Paper-1 (January 2019)

Course:	II PUC	**Subject:**	Biology
Max. Marks:	70	**Duration:**	3:15 hrs.

INSTRUCTIONS:-

1. **Draw neat labeled diagrams wherever necessary.**
2. **Extra questions should be answered separately.**

PART-A

I. Answer the following in one word or one sentence each. 10x1=10

1. Define pericarp.
2. Name the amino-acid which substitutes glutamic acid in the □-globin chain of haemoglobin in sickle cell anaemia.
3. Who proposed chemical evolution of life?
4. Mention the principle on which ELISA is based.
5. What is the disadvantage of leaded petrol used as a fuel in modern automobiles?
6. Write the scientific name of the microbe which is used in the manufacture of citric acid.
7. How many base pairs are present in one gyre of DNA.
8. In which part of India Jhum Cultivation is practiced?
9. What are interferons?
10. Name the oral contraceptive for the females developed by CDRI.

PART-B

II Answer (Any Five) of the following:- 5x2=10

11. Draw a neat labeled diagram of a transcription unit.
12. Mention two genes that are responsible for producing cry protein to control cotton bollworms.
13. Distinguish pistillate flowers from staminate flowers.
14. List any two bioactive molecules of fungal origin and explain how those molecules help in restoring good health in humans.
15. Mention any two harmful effects of ozone depletion in humans.
16. Name the nucleotides of DNA.
17. Differentiate Chasmogamous flowers and Cleistogamous flowers.
18. What is colostrum? Mention its benefits.

PART-C

III Answer (any Five) of the following:- 5x3=15

19. Sketch and label pBR 322.
20. Mention the cause and any 2 symptoms of altitude sickness. How the human body compensates oxygen loss at high altitude.
21. What is biofortification? List any two biofortified crops and their importance.
22. What is gene therapy? Explain the steps involved in curing ADA deficiency by gene therapy.
23. Explain Sex-determination in Honey-bees.
24. State any three criteria which a molecule must fulfill to act as a genetic material.
25. Write the schematic representation of oogenesis.
26. Explain Miller's experiment with a neat labeled diagram.

PART-D
SECTION-I

IV. Answer (Any Four) of the questions:- **4x5=20.**

27. Draw a neat labeled diagram of human male reproductive system.
28. State the law of independent assortment. Explain it with an example.
29. Explain the process of translation in eukaryotes.
30. Write a note on
    (a) Down's syndrome
    (b) Klinefelter's Syndrome.
31. Describe the role of microbes as biofertilizers.
32. Industrial melanism in peppered moth is an excellent example of natural selection. Justify the statement.

SECTION-II

V. Answer (Any three) of the following questions:- **3X5=15**

33. Define the following with an example
    (a) Amensalism (b) parasitism (c) Commensalism (d) Resource partitioning (e) Competitive release.
34. Describe the various steps involved in the process of decomposition of detritus.
35. Describe the Avery's experiment on bio-chemical characterization of Transformation principle.
36. Explain the following:-
    (a) FOAM (b) e-waste (c) Greenhouse gases
    (b) Montreal protocol (e) Chipko movement.
37. Explain phosphorus cycle with a schematic representation.

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