BSc DEGREE (CBCS) EXAMINATION, MARCH 2020

Sixth Semester

Core course - ZY6CRT11 - BIOTECHNOLOGY, BIOINFORMATICS AND MOLECULAR BIOLOGY

B.Sc Biological Techniques and Specimen Preparation Model III,B.Sc Zoology and Industrial Microbiology Model III Double Main,B.Sc Zoology and Industrial Microbiology Model III Double Main,B.Sc Zoology Model II Aquaculture,B.Sc Zoology Model II Food Microbiology,B.Sc Zoology Model II Medical Microbiology

2017 Admission Onwards

F4DB7FC3

Time: 3 Hours   Marks: 60

Part A

*Answer any **ten** questions.*

*Each question carries **1** mark.*

1. Define host cell.

2. List out any two applications of PCR.

3. What do you mean by blotting?

4. Mention any two applications of DNA fingerprinting.

5. Which soil bacteria produces Bt-toxins?

6. What is a geographical indication (GI)

7. Differentiate between Bioinformatics and Computational biology.

8. What is phylogenetic tree?

9. What is nucleoid?

10. What is RNA primer?

11. List out the stop codons.

12. Define polycistronic mRNA.

(10×1=10)

*Answer any **six** questions.*

*Each question carries **5** marks.*

13. Give a short account on artificial chromosomes.

14. Describe the steps involved in nucleic acid hybridization technique.

15. Expalin the process of organismal cloning.

16. Comment on SWISS-PROT.

17. Write a short essay on multiple sequence alignment.

18. Compare and contrast the DNA and RNA.

19. Write an account on Cistron, Recon and Muton.

20. Describe one gene-one polypeptide hypothesis stating example.

21. Explain the role of various effector molecules in eukaryotic gene regulation.

(6×5=30)

Part C

*Answer any **two** questions.*

*Each question carries **10** marks.*

22. Describe the scope and importance of biotechnology.

23. Briefly explain the basic concept of Drug discovery pipeline.

24. Write an essay on various experiments that substantiates DNA as the genetic material.

25. Give a detailed account on prokaryotic translation mechanisms with suitable diagrams.

(2×10=20)