21	P316 (Pages	: 2) Name	e:
		Reg.1	No:
THIRD SEMESTER M.Sc. DEGREE EXAMINATION, NOVEMBER 2022			
	(CBCSS	,	
(Regular/Supplementary/Improvement)			
CC19P ZO3 C09 - MICROBIOLOGY AND BIOTECHNOLOGY (Zoology)			
	(2019 Admissi		
Tim	ne: 3 Hours	ŕ	aximum : 30 Weightage
	Part		
Answer any <i>four</i> questions. Each question carries 2 weightage.			
1.	Explain types of nutrition in bacteria.	1	
2.		faction?	
	Distinguish between Blunt end and cohesive end lig		
	Define Sanger's method.	,	
5.			
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6.	Define Intellectual Property Protection.		
7.	Explain about ethics of social acceptance of industr	ial biotechnology.	
			$(4 \times 2 = 8 \text{ Weightage})$
	Part		
	Answer any <i>four</i> questions. Each	question carries 3 weightage.	
8.	Explain taxonomic ranks and phylogenetic studies is	n microbial taxonomy.	
9.	Explain bacterial growth and different methods to n	neasure bacterial growth.	
10.	Explain lactic acid fermenation and its types.		
11.	Discuss the importance of Real Time PCR.		
12.	Explain the details of AFLP.		

 $(4 \times 3 = 12 \text{ Weightage})$ 

13. Describe the procedure of DNA micro injection.

14. Describe NPV.

## Part-C

Answer any two questions. Each question carries 5 weightage.

- 15. Explain the structural properties of virus and detail the various human diseseses caused by virus.
- 16. Discuss about branches, scope and importance of Biotechnology.
- 17. Discuss the detailed applications of Biotechnology in animal and human healthcare.
- 18. Discuss the details of cloning procedure.

 $(2 \times 5 = 10 \text{ Weightage})$ 

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