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VIT®

Vellore Institute of Technology
(Deemed to be University under section 3 of UGC Act, 1956)

School of Biosciences and Technology

CONTINUOUS ASSESSMENT TEST - II

FALL SEMESTER 2024-2025

Programme Name & Branch : B. Tech & Biotechnology
Course Code and Course Name : BBIT203L and Microbiology
Faculty Name(s) : Prof. Dr Suneetha Vuppu and Dr.Kavitha.M
Class Number(s) : VL2024250104088 and VL2024250104085
Exam Duration : 90 minutes Maximum Marks: 50

General instruction(s):

- **Answer All Questions and draw the diagrams where ever REQUIRED**

Q. No	Question	M	CO	BL
1.	**a) How can you assay if virus is present in sewage sample and add a note on von magnus phenomenon? (5 Marks)** **b) Which structural feature of Gram-negative bacteria is responsible for their endotoxicity and add a note on endotoxin measurement? (5 Marks)**	10	3	2
2.	**a) Critically review the merits and demerits of five kingdom and three domain systems of classification. (5 Marks)** **b) Compare and contrast numerical and molecular taxonomy (5Marks)**	10	2	3
3.	a) Comment and generalize how dimorphism and sexual spore classify fungi (5 marks) **b) Define the following. Give example if necessary. (Each 1 mark)** **i) Chitin ii) Lichens iii) Algal bloom iv) Diatoms** **v) Phytoplankton**	10	1	4
4.	Explore the role/s of the following structural features of viruses with example if necessary. (Each 2 marks) **i) Tail fibers of bacteriophage** **ii) Capsomere** **iii) Positive and negative strand of viruses** **iv) Reverse transcriptase** **v) lambda phages**	10	3	5
5.	a) Sketch the possible fermentation pathway when glucose is given as carbon source for the following microbes. **(5 Marks)** **i) *Saccharomyces cerevisiae*** **ii) *Lactobacillus plantarum*** **b) Interpret the various techniques used to preserve industrially important bacterial cultures (5 Marks)**	10	5	4

ALL THE BEST

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