CODE No.: 19BT1BS02 SVEC-19

SREE VIDYANIKETHAN ENGINEERING COLLEGE

(An Autonomous Institution, Affiliated to JNTUA, Ananthapuramu)

I B.Tech I Semester (SVEC-19) Regular Examinations December - 2019

BIOLOGY FOR ENGINEERS

[Electrical and Electronics Engineering, Electronics and Communication Engineering, Electronics and Instrumentation Engineering]

Time: 3 hours **Max. Marks: 60**

Answer One Question from each Unit
All questions carry equal marks

		UNIT-I				
1.		Enumerate any ten major points of difference between prokaryotes and eukaryotes with two examples for each group of organisms.	12 Marks	L2	CO1	PO1
		(OR)				
2.		Discuss in detail the classification of organisms based on the utilization of carbon and energy sources.	12 Marks	L1	CO1	PO1
		UNIT-II				
3.		Explain with suitable examples the hierarchical organization of protein structure with special emphasis on the importance of 3D structure.	12 Marks	L2	CO1	PO1
		(OR)				
4.		Give the functional classification of proteins encompassing the six major classes with two examples for each.	12 Marks	L1	CO1	PO1
		UNIT-III				
5.		What is a Dihybrid cross? Discuss the Mendel's Law of inheritance that can be explained by a dihybrid cross. Work out the results of a dihybridcross upto F_2 generation and throw light on genotypic and phenotypic ratios.	12 Marks	L2	CO2	PO1
		(OR)				
6.	a)	Define 'Genetic code'. Elaborate on the triplet code system at the level of DNA and RNA.	6 Marks	L1	CO2	PO1
	b)	What do you understand by 'Degenerate codons'? Give two examples of amino acids with redundant codons.	6 Marks	L1	CO2	PO1
		UNIT-IV				
7.		What are Transgenic Organisms? Elaborate on the steps involved in the production of a transgenic plant.	12 Marks	L1	CO2	PO6
		(OR)				
8.		Discuss the two significant recombinant products that are successfully employed in the treatment of human diseases.	12 Marks	L2	CO2	PO6
		UNIT-V				
9.		Define 'Synapse'. Explain the synaptic transmission of nerve impulse across a neuro-muscular junction.	12 Marks	L1	CO1	PO1
		(OR)				
10.		What is DNA Fingerprinting? Explain the methodology with two major applications in forensic studies.	12 Marks	L2	CO3	PO6