Q.P. Code: 18HS0803 **R18**

Reg. No: | | | | | | | | | | |

SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY:: PUTTUR

(AUTONOMOUS)

B.Tech II Year I Semester Supplementary Examinations November-2020

BIOLOGY FOR ENGINEERS

(Common to CE, EEE, ME & AGE)

Time: 3 hours Max. Marks: 60

PART-A

(Answer all the Questions **5 x 2 = 10** Marks)

1	**a**	What is the basic principle behind birds flying?	**2M**
	b	Define Phenotype and Genotype	**2M**
	c	Difference between Polypeptide and Polynucleotide	**2M**
	d	Show us the start and stop codons	**2M**
	e	Write a note on light microscopy and microbiology	**2M**

PART-B

(Answer all Five Units 5 x 10 = 50 Marks)

UNIT-I

2	**a**	Discuss classification of living organisms based on cellularity- Unicellular or multicellular.	**5M**
	b	Distinguish between Prokaryotes and eukaryotes with examples.	**5M**
		OR	
3	**a**	Compare and write about the human eye and camera.	**5M**
	b	Illustrate the role of Nomenclature in living organisms.	**5M**

UNIT-II

4		Explain in detail about single gene disorders and its types with examples.	**10M**
		OR	
5	**a**	Summarize Monohybrid cross.	**5M**
	b	Demonstrate Di-hybrid cross.	**5M**

UNIT-III

6	**a**	Define Proteins. What are the types of proteins?	**5M**
	b	Name the types of lipids and functions of lipids.	**5M**
		OR	
7	**a**	Classify enzymes and give two examples.	**6M**
	b	Distinguish between DNA and RNA.	**4M**

UNIT-IV

8	**a**	Outline the Watson-crick model of DNA.	**6M**
	b	Justify DNA as a genetic material with one example.	**4M**
		OR	
9	**a**	Explain hierarchy in protein structure.	**5M**
	b	List out the functions of proteins with an example.	**5M**

UNIT-V

10	**a**	Classification of Microbes based on morphology.	**5M**
	b	Explain the principles of light microscopy.	**5M**
		OR	
11	**a**	Elaborate the steps involved in glycolysis as flowchart.	**5M**
	b	Analyze the difference between Endergonic and Exergonic reaction.	**5M**

END