

Code: 20MC1101

**I B.Tech - I Semester – Regular / Supplementary Examinations  
FEBRUARY - 2023**

**LIFE SCIENCES FOR ENGINEERS  
(Common for EEE, ME, ECE, AIML, DS)**

Duration: 3 hours

Max. Marks: 70

Note: 1. This paper contains questions from 5 units of Syllabus. Each unit carries 14 marks and have an internal choice of Questions.

2. All parts of Question must be answered in one place.

BL – Blooms Level

CO – Course Outcome

			BL	CO	Max. Marks
<b>UNIT-I</b>					
1	a)	Differentiate between prokaryotes and eukaryotes.	L3	CO1	10 M
	b)	Identify the similarities between eye and camera.	L3	CO1	4 M
<b>OR</b>					
2	a)	Prepare the procedure to dissect and mount plant stem using microscope.	L3	CO4	10 M
	b)	Choose the various adaptations of a bird inspired by aeronauts to model a plane.	L3	CO1	4 M
<b>UNIT-II</b>					
3	a)	Categorize different types of Antibodies and explain the structure.	L4	CO2	7 M
	b)	Construct the structure of RNA with a neat diagram.	L3	CO1	7 M

<b>OR</b>					
4	a)	List out different enzymes and their industrial applications.	L4	CO2	7 M
	b)	Make use of your knowledge of fermentation process to apply in industrial field.	L3	CO1	7 M
<b>UNIT-III</b>					
5		Analyze how pyruvic molecules are synthesized in in glycolytic pathway.	L4	CO3	14 M
<b>OR</b>					
6		Outline the process of dark reaction to identify the end products using photosynthetic equation.	L4	CO3	14 M
<b>UNIT-IV</b>					
7	a)	Prepare the three laws postulated by Mendel in detail.	L3	CO1	7 M
	b)	Calculate If two heterozygous black guinea pigs are crossed what is the probability of the first off-spring becoming the black or white pig?	L3	CO4	7 M
<b>OR</b>					
8	a)	Categorize single gene disorders with examples.	L4	CO2	7 M
	b)	Explain 9:3:3:1 ratio formation using punnett square.	L3	CO5	7 M

**UNIT-V**

9	a)	Choose a methods to create transgenic plants and give examples.	L4	CO2	10 M
	b)	“Xanthophyll a precursor for vitamin-A secretion”. Explain the statement how the technique adopted in production of Golden rice?	L4	CO2	4 M

**OR**

10		Examine the types of biosensors and their applications in different engineering fields.	L4	CO2	14 M
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