Model Question Paper-1 with effect from 2022-23 (CBCS Scheme)

USN | | | | | | | | | | |

Fourth Semester B.E. Degree Examination
Biology for Engineers

TIME: 03 Hours **Max. Marks: 100**

Note: 01. Answer any **FIVE** full questions, choosing at least **ONE** question from each **MODULE**.

		Module -1	*Bloom's Taxonomy Level	Marks
Q.01	a	Justify- the requirements of whey protein for human body.	L4	10
	b	Explain with neat sketch: Structure & functions of cell.	L2	10
		OR		
Q.02	a	How stem cells can be used to treat various real time health issues.	L4	10
	b	List the differences between Prokaryotic & Eukaryotic cells.	L2	10
		Module-2		
Q. 03	a	Explain the properties of cellulose, justify cellulose as an effective water filter.	L3	10
	b	Explain the structure of Glucose Oxidase (GOx) in biosensors.	L2	10
		OR		
Q.04	a	PHA's are biodegradable- Justify with an example.	L3	10
	b	Explain the development of DNA Vaccine.	L2	10
		Module-3		
Q. 05	a	With a neat sketch explain the working principle of Heart-Lung Machine.	L2	10
	b	What are the engineering solutions for Parkinson's disease?	L2	10
		OR		
Q. 06	a	Explain Brain as a CPU.	L2	10
	b	Explain the architecture of rod and cone cells.	L2	10
		Module-4		
Q. 07	a	What is Echolocation? Explain Ultrasonography.	L2	10
	b	What are the potential applications of Shark skin-Inspired swim suits?	L3	10
		OR		
Q. 08	a	Write a note on HBOC's and PFC's.	L2	10
	b	Discuss the design structure of Bullet train inspired from Kingfisher's beak.	L3	10

Module-5				
Q. 09	a	What is the role of Bio-imaging and AI in disease diagnosis?	L2	10
	b	Write a note on self-healing bio-concrete and bio-mining.	L2	10
OR				
Q. 10	a	Explain the technique of bio-printing and materials used bio-printing.	L2	10
	b	Discuss the bio-engineering solutions for Muscular dystrophy.	L2	10