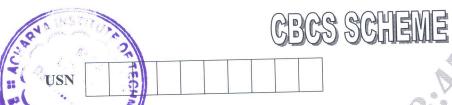
10



18BT651

(10 Marks)

xth Semester B.E. Degree Examination, June/July 2023 **Biology for Engineers**

Max. Marks: 100 Time: 3 hrs.

Time: 3 hrs.					
Note: Answer any FIVE full questions, choosing ONE full question from each module.					
Note. Answer any 11, 2 jun question					
			Module-1	diagram. (10 Marks)	
1	a.	Illustrate the structure of plant a	nd animal cell by drawing lebelled	vision. (10 Marks)	
	b.	Explain the different phases of p	ain the different phases of prophase – I of meiotic first cell division.		
OR					
2	a.	Write a detailed note on stem ce	ells and their clinical applications.	(10 Marks)	
4	b.	What is cell sorting? Explain pr	inciple and instrumentation of flow	w cytometry (FACS). (10 Marks)	
	0.			(10 Marks)	
			Module-2	(10 Mowles)	
3	a.	Discuss the biological importan	ace of carbohydrates lipids and am	inoacids. (10 Marks)	
	b.	What is central dogma? Explain	the flow of genetic information is	(10 Marks)	
		A P			
			OR	(10 Marks)	
4	a.	Explain the mechanism of trans	scription in prokaryotes.	(10 Marks)	
	b.	Discuss different phases of tran	islation in prokaryoles.		
Module=3					
5	a.	How are enzyme classified? Ex	xplain different classes of enzymes	s with suitable example. (10 Marks)	
3	a.			(10 Marks)	
	b.	Discuss different factors affect	ing enzyme action.	(10 11201-11)	
		X Y	OR		
6	0	What are immobilized enzyme	es? Mention their applications.	(10 Marks)	
6	a. b	Write note on:			
	D	(i) Applications of enzymes	in textile and food industry	(10 Marks)	
		(ii) Restriction enzymes in g	enetic engineering	(10 Marks)	
		A. and	Module-4	rials (10 Marks)	
	,	Will a standard Mention different properties of biomaterials.			
7	a b	Write the various applications	of Gelatin and immobilized biom	aterials. (10 Marks)	
	U	. Write the variety			
			OR	(10 Marks)	
8	8 a. Write the applications of biomaterials in cell growth and cu			chines with suitable example. (10 Marks)	
	t	a. Write the applications of biomaterials in cell growth and culture.b. Discuss in detail the protein as biological motors/molecular machines with suitable.			
			Module-5		
9		The seconds	s of biodesigns and its applications	. (10 Marks)	
		- 1 1 1 · · · · · · · · · · · · · · · ·	iques and its applications.	(10 Marks)	
	1	b. Discuss the bioprinting technique			
			OR	(10 Marks)	

What is bioremediation? Explain the process involved in removal of lead, cadmium and mercury using bioremediation.

Explain EEG and its monitoring in neurological disorders.