SEAT No.\_\_\_\_

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[68]

## SARDAR PATEL UNIVERSITY

B.Sc Examination, 5th Semester (Nt)

## BIOTECHNOLOGY

Friday, 13-04-2018

## USO5CBIT-05

(Environmental Biotechnology)

	(Environmenta	l Biotechnology)						
1e: <b>02</b> .	:00 PM to 05:00 P.M.	Total Marks: 7	Total Marks: 70					
1	MULTIPLE CHOICE QUESTION		1Ò					
1.	The step in which organic matter is oxidized with the help of aerobic microbes in the waste water treatment plants is							
	a) Primary treatment							
	b) Secondary treatment	c) Tertiary treatment						
2.	The secondary pollutants leading to the	d) All of the above						
	The secondary pollutants leading to that a) CO	e formation of photochemical smog.						
	b) PAN	c) Co2						
3.		d) All of the above						
٥.	a) Smelting	volved in conventional mining process?						
	b) Heating	c) Blasting						
4.		d) All of the above						
7.	a) 2-3	lobus species in leaching process is						
	b) 3-4	c) · 4-6						
5.	,	d) All of the above						
J.	leaching is mostly used where huge piles are collected from waste residues.							
	a) Dump	. ) T ''						
	b) Vat	c) In-situ						
6.		d) All of the above						
	The compounds that resist biodegradation and thereby persist in environment are called?							
	a) Xenobiotics	c) Recalcitrant						
	b) Pollutants	d) Biomolecules						
7.	The uptake of contaminants by the roots of plant which are immersed in water is called?							
	a) Phytotransformation	c) Phytovolatization						
	b) Phytoextraction	d) Rhizofilteration						
8.	The measure change in absorbance caused by the product generated by catalytic							
	reaction?							
	<ul> <li>a) Optical Biosensor</li> </ul>	c) Electrochemical Biosensor						
	b) Calorimetric Biosensor	d) Whole cell Biosensor						
9.		Since several years genes of PHB biosynthesis is derived from?						
	a) Trichosporon cutaneum	c) Alcaligenes eutrophus						
	b) <i>Euphorbia lathyris</i>	d) Pseudomonas auerogenosa						
	•	,						

	10.	Production of bioplastic in cotton fibrosis penzymes. a) Acetyl Co-A reductase		ole as cotton fibres contains  PHB synthase		
		b) β-Ketothiolase		All of the above	•	
Q-2	1.	SHORT QUESTION( attempt any ten)			20	
	2.	What do you mean by Eutrophication?	1.005			
	3.	Give suitable differences between BOD and COD What do you understand by term flocculent and sludge granules.				
	4.	Define: Bioleaching and give its application.				
	5.	DEFINE: Biobenefication and Biosorption				
	6.	Which techniques are involved for conventional mining for metallic minerals?				
	7.	now are Aenobiotic a potential hazard to man and environment				
	8.	Name few microorganism used in Bioremediation.				
	9. 10.	Discuss Pros and Cons of Phytoremediation				
	10.	· · · · · · · · · · · · · · · · · ·				
	12.	" " The state of the Cartolities				
	12.	Give the use of Biosensol in Environmental	contro	1,		
Q-3	Α	Discuss various pollutants present in atmosphere causing air pollution			Δ.σ.	
	В	Give an account on: UASB	p11010 0	attorng an politicion	05 05	
		OR				
Q-3	A	Write note on: Activated sludge process			06	
	В	Give and account on TOC.			04	
Q-4	Α	Explain the mechanism for bioleaching of co	mner m	natal from its one	06	
	В	Explain the mechanism for bioleaching of copper metal from its ore.  Describe general properties of microorganism involved in leaching				
		OF	}		04	
Q-4	A	Discuss Direct and In-Direct mechanism for	extract	tion of metals.	06	
	В	Give significance of Bioleaching			04	
Q-5	A	Discuss In aits and English of the				
Q-3	А	Discuss In-situ and Ex-situ strategies for bio		iation	10	
Q-5	Á	Discuss in detail Bio magnification with any		itable and the		
-	В	Discuss mechanism for degradation of Pestic	ide ide	maole examples.	05	
					05	
Q~6	A	Give Principal of Biosensors and Discuss any two types of biosensor in detail.  OR				
Q-6	A	Discuss various approach used for production		IB Bionlastic	05	
	В	Discuss various sources used for production of	of Bior	plastic.	05 05	