	Enrollm	ent No:					
			C.U.SHAH	UNIVERSITY			
	Summer Examination-2018 Subject Name: Microbial Physiology and Metabolism						
	Subject Code: 4SC03MPM1			Branch: B.Sc. (Microbiology)			
	Semeste	r: 3	Date: 04/04/2018	Time: 02:30 To 05:30	Marks: 70		
	(2) 1 (3) 1	Use of Pr Instruction Draw nea	•	ny other electronic instrument is pook are strictly to be obeyed. ecessary) at right places.	prohibited.		
Q-1	L	Define	the following terms:		(14)		
	a)	Diauxio	c growth				
	b)	Anabol	_				
	c)	Baroph	ilics				
	d)	Uncoup					
	e)		c growth rate				
	f)		ited transport				
	g)	Antipo	rt				
	h)	ETC	ilaa				
	i) j)	Haloph BGA	illes				
	J) k)		ynthetic bacteria				
	1)	-	fication				
	m)	Pasteur					
	n)		ynthesis				
Atte	empt any f	four que	stions from Q-2 to Q-8				
Q-2	2	Attem	ot all questions		(14)		
	a)		note on alcohol fermentation		(7)		
	b)	Explair	n the concept of linear ferme	ntation pathway	(7)		
Q-3	3	Attem	ot all questions		(14)		
-	a)	Explair	n citric acid cycle.		(7)		
	b)	Explair	n EMP pathway		(7)		



Attempt all questions
Write a note on active and passive transport of nutrients in bacteria

Compare the mitochondrial and bacterial ETC

Q-4

a)

b)

(14)

(7) (7)

Q-5		Attempt all questions	(14)
	a)	Explain the concept of biological nitrogen fixation	(7)
	b)	Graphically explain the bacterial growth and various factors affecting the growth	(7)
Q-6		Attempt all questions	(14)
	a)	What is Fermentation? Discuss the lactate fermentation method in detail.	(7)
	b)	Explain the concept of group translocation in bacteria with reference to Iron uptake	(7)
Q-7		Attempt all questions	(14)
	a)	Elucidate Z- scheme of photophosphorylation on a redox scale in a photosynthetic system.	(7)
	b)	Write a note on phototrophic microorganism alongwith their classification	(7)
Q-8		Attempt all questions	(14)
-	a)	Explain the concept of Pasteur effect with the help of a suitable example	(7)
	b)	Give the classification of bacteria on the basis of temperature, pH, and water activity	(7)

