C. U. SHAH UNIVERSITY Winter Examination-2022

Subject Name : Microbial Physiology and Metabolism

Subject Code : 4SC03MPM1			Branch: B.Sc. (Microbiology)	
Seme	ster: 3	Date: 25/11/2022	Time: 11:00 To 02:00	Marks: 70
Instru (1 (2 (3 (4	ctions:) Use () Instru) Draw) Assu	of Programmable calculator & any actions written on main answer bo r neat diagrams and figures (if neo me suitable data if needed.	y other electronic instrument is pr bok are strictly to be obeyed. cessary) at right places.	ohibited.
Q-1		Attempt the following question	15:	(14)
	 a) b) c) d) e) f) g) h) i) j) k) l) m) n) 	What is obligate anaerobe? Define Denitrification. Write the full form of ETC What is phototrophic bacteria? Define Photosynthesis What are thermoduric bacteria? What are thermoduric bacteria? What are methanogens? Define Halophiles Give full form of NADPH. What is anabolism? What is binary fission? Enlist the types of diffusion. Define fermentation.		
Atten	npt any	four questions from Q-2 to Q-8	3	
Q-2	(a) (b)	Attempt all questions Draw the structural ED pathway Describe synchronous growth.	and write a detail note on it	(14) 7 7
Q-3	(a) (b)	Attempt all questions Explain citric acid cycle. Give a detail note on bacterial gr	rowth curve.	(14) 7 7
Q-4	(a) (b)	Attempt all questions Write a note on active and passiv Give a detail note on iron transpo	ve transport of nutrients in bacteri ort in bacteria.	a 7 7



Q-5		Write a detail note on pentose phosphate pathway.	(14)
Q-6	(a) (b)	Attempt all questions State and explain different types of cellular transport Aerobic Respiration	(14)
Q-7		Explain the internal structure and functions of mitochondria. Describe its unique significance.	(14)
Q-8		Attempt all questions	(14)
	(a)	Write a detail note on bacterial growth in response to temperature.	7
	(b)	Write a note on alcohol fermentation.	7

