

C.U.SHAH UNIVERSITY

Summer Examination-2017

Subject Name : Prokaryotic metabolism

Subject Code : 4SC04PRM1

Branch : B.Sc. (Microbiology)

Semester : 4

Date : 20/04/2017

Time : 10:30 To 01:30

Marks :70

Instructions:

- (1) Use of Programmable calculator & any other electronic instrument is prohibited.
- (2) Instructions written on main answer book are strictly to be obeyed.
- (3) Draw neat diagrams and figures (if necessary) at right places.
- (4) Assume suitable data if needed.

Q-1	Attempt the following questions:	(14)
	a) Define Glycolysis.	1
	b) Draw structure of Bacterial ATPase.	1
	c) Define lipid.	1
	d) Give types and examples of fatty acid.	1
	e) Define aerobic respiration.	1
	f) Define photosynthesis.	1
	g) Write two examples of methanogens.	1
	h) Give full form of TCA and HMP.	1
	i) Give difference between bacterial and mitochondrial ATPase.	1
	j) Give two significance of phosphorylation.	1
	k) Give two examples of green Sulphur bacteria.	1
	l) Give two examples of purple Sulphur bacteria	1
	m) Enlist the method or mechanism used for fatty acid hydrolysis.	1
	n) Define ketogenesis.	1

Attempt any four questions from Q-2 to Q-8

Q-2	Attempt all questions	(14)
	A Explain in details about regulation in glycolysis.	7
	B Write a note on historical account of photosynthesis.	7
Q-3	Attempt all questions	(14)
	A Write note on mechanism used for oxidation of sulfur compound.	7
	B Explain generation and maintenance of PMF.	7



Q-4	Attempt all questions	(14)
A	Explain mechanism used for electron transport in mitochondria.	7
B	Write note on energy yields from fatty acid oxidation.	7
Q-5	Attempt all questions	(14)
A	Write note on beta and omega oxidation.	7
B	Write note on oxygenic and anoxygenic photosynthesis.	7
Q-6	Attempt all questions	(14)
A	Compare aerobic and anaerobic glycolysis.	7
B	Explain biochemistry of methanogens.	7
Q-7	Write a note on diversity of phototrophic bacteria.	(14)
Q-8	Describe on photosynthetic pigments.	(14)

