C.U.SHAH UNIVERSITY Summer Examination-2017

Subject Name : Microbial Energetics

Subject Code : 5SC0	2MIE1	Branch: M.Sc. (Microbiology)	
Semester : 2	Date : 09/05/2017	Time : 02:00 To 05:00	Marks : 70

Instructions:

- (1) Use of Programmable calculator and 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.

SECTION – I

Q-1 Attempt the Following questions

- **a.** What is catabolism?
- **b.** What is antiport?
- **c.** Write full form DAG.
- **d.** c-AMP is a type of secondary messenger. True/False
- e. Mitochondria are believed to have evolved from symbiotic aerobic bacteria ingested by an anaerobic host cell. True/False
- **f.** Write full form of IP3?
- **g.** What is anaerobic resoiration?

Attempt All Questions.

Q-2
aAttempt the following:
What do you mean by secondary messenger? Explain it with suitable examples.7bBriefly explain the steps of Glycolysis.7

OR

Q-2 What do you mean by cell communication? Explain various methods of cell (3+11) communications with suitable examples.

Q-3 Attempt all questions

a	What is quorum sensing? Explain it with suitable examples.	7
b	Explain the two components system in bacteria.	7
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Q-3	a b		What is ATP synthase? Explain its working mechanism with suitable diagram. Explain the steps of Kreb's cycle.	7 7
0-4			SECTION – II Attempt the Following questions	7
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		a.	Mitochondria contain a small DNA chromosome. True/False	
		D. C	what is symport? Pinocytosis is also known as cell drinking. True/False	
		c. d.	What is clathrin?	
		e.	Cisternae is a part of ER. True/False	
		f.	Write the full form of AHLs.	
		g.	How many stages of sporulation are present in <i>Bacillus subtilis</i> .	
0-5			Write short notes on-	
	a		Transport into chloroplast	7
	b		Chemical signaling	7
			OR	
Q-5	a		Activation energy	7
-	b		HSPs	7
0-6			Write short notes on-	
×Ψ	a		Membrane proteins	7
	b		Explain the structure of histidine kinase with suitable diagram.	7
			OR	
Q-6			Attempt all Questions	~ -
	a		what is G-Protein? Explain how G-coupled signals work in cell.	2+5
	b		What active transport? Briefly explain the process of active transport with suitable	2+5
			diagram.	

