

Enrollment No: \_\_\_\_\_

Exam Seat No: \_\_\_\_\_

# C. U. SHAH UNIVERSITY

## Summer Examination-2022

Subject Name: Microbial Physiology and Metabolism

Subject Code: 4SC03MPM1

Branch: B.Sc. (Microbiology)

Semester: 3

Date: 28/04/2022

Time: 02:30 To 05:30

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.

---

<b>Q-1</b>	<b>Define the following:</b>	<b>(14)</b>
	a) Methanogens.	01
	b) ETC.	01
	c) Mesophile.	01
	d) Passive transport.	01
	e) TCA Cycle.	01
	f) Acidophile.	01
	g) EMP Pathway.	01
	h) Uncouplers.	01
	i) Inhibitors.	01
	j) Denitrification.	01
	k) Anoxygenic Photosynthesis.	01
	l) Pasteur effect.	01
	m) Aerobes.	01
	n) Xerophile	01

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

<b>Q-2</b>	<b>Attempt all questions</b>	<b>(14)</b>
	a Explain anoxygenic photosynthesis.	<b>07</b>
	b Describe synchronous growth.	<b>07</b>
<b>Q-3</b>		<b>(14)</b>
	Write a detailed note on glycolysis.	
<b>Q-4</b>	<b>Attempt all questions</b>	<b>(14)</b>
	a Explain oxygenic photosynthesis.	<b>07</b>
	b Write a note on biological nitrogen fixation.	<b>07</b>
<b>Q-5</b>	<b>Attempt all questions</b>	<b>(14)</b>
	a Write a note on fermentation.	<b>07</b>
	b Describe Batch culture.	<b>07</b>



- Q-6** Write a detailed note on TCA cycle. **(14)**
- Q-7** **Attempt all questions** **(14)**  
**a** State and explain different types of cellular transport. **07**  
**b** Describe bacterial ETC. **07**
- Q-8** **Attempt all questions** **(14)**  
**a** Explain ED pathway. **07**  
**b** Describe microbial growth in response to various environment. **07**

