Enrollment No: _____ Exam Seat No:_____

C.U.SHAH UNIVERSITY

Summer Examination-2016

Subject Name : Agricultural Microbiology

Subject Code : 4SC06AGM1

Branch: B.Sc.(Microbiology)

Semester : 6 **Date : 13/05/2016** **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.

Q-1 **Attempt the following questions:** **(14)**

a)	Define Biofertilizer.	1
b)	Define compost.	1
c)	Define pasteurization.	1
d)	Write reaction of phosphate solublization.	1
e)	Write names of two common milk spoiling microorganisms.	1
f)	What is ammonification?	1
g)	Write examples of two bacteria which can be used as biofertilizers.	1
h)	Enlist types of composts.	1
i)	What is rhizosphere?	1
j)	Write components of LCM.	1
k)	Which enzymes are produced by microorganisms during degradation of lignocellulosic material?	1
l)	Enlist types of plant disease based on symptoms.	1
m)	What are non symbiotic nitrogen fixing microorganisms? Give one example.	1
n)	Write names of any two milk borne diseases.	1

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

Q-2 **Attempt all questions** **(14)**

Explain symbiotic and nonsymbiotic nitrogen fixation in detail with flow diagram **14**

Q-3 **Attempt all questions** **(14)**

A	Explain use of *Azolla* as biofertilizer with diagram	**7**
B	Explain use of *rhizobium* as biofertilizer with diagram	**7**

Q-4		**Attempt all questions**	**(14)**
	A	Explain phosphate solublization processes and its uses as fertilizer	**7**
	B	Explain side effects of overusing biofertilizer in fields.	**7**
Q-5		**Attempt all questions**	**(14)**
	A	Explain root nodule formation in plant with diagram.	**7**
	B	Explain components of milk in details with pasteurization.	**7**
Q-6		**Attempt all questions**	**(14)**
	A	Explain milk degradation in detail.	**7**
	B	Explain vermicomposting in detail with diagram.	
Q-7		**Attempt all questions**	**(14)**
	A	Explain epidemiology of plant diseases.	**7**
	B	Explain complete biodegradation of Lignocellulosic material in detail with diagram.	
Q-8		**Attempt all questions**	**(14)**
	A	Explain classification of plant disease based on symptoms.	**7**
	B	Explain production and application of *Azatobacter*.	**7**