Enrollment No: _____ Exam Seat No:_____

C.U.SHAH UNIVERSITY

Summer Examination-2018

Subject Name: Plant Biotechnology

Subject Code: 4LS03BOT1/4SC03PBT1 Branch: B.Sc. (Microbiology)

Semester: 3 Date: 22/03/2018 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) What is Ti plasmid?
b) Define Protoplast.
c) What is a transgenic plant?
d) Define plasmid
e) Define PTC
f) What is micropropagation?
g) What is copy number of a plasmid?
h) What is Somatic embryogenesis
i) Name any herbicide resistant transgenic plant
j) Write any two applications of Plant Tissue Culture
k) Define sterilization
l) Green House is used for what purpose?
m) Name any media used for PTC
n) Name the organism from which Ti plasmid is isolated

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

Q-2 Attempt all questions (14)

a) Write a note on applications of PTC in forestry **(7)**
b) Explain in detail the process of somatic hybridization **(7)**

Q-3 Attempt all questions (14)

a) Write a note on organ culture **(7)**
b) How Ti plasmid is used as vector for gene transfer? Explain it. **(7)**

Q-4 Attempt all questions (14)

a) Write a note on applications of transgenic plants **(7)**
b) Explain the process of Electroporation and Microinjection **(7)**

Q-5		**Attempt all questions**	**(14)**
	a)	How genes are transferred using Liposome? Explain it	**(7)**
	b)	Write a note explain the applications of PTC	**(7)**
Q-6		**Attempt all questions**	**(14)**
	a)	Write the principle, methodology and application of callus culture	**(7)**
	b)	Write a note on growth regulators used in PTC.	**(7)**
Q-7		**Attempt all questions**	**(14)**
	a)	Explain the various the sterilization techniques used in PTC	**(7)**
	b)	Write the precautionary measures which should be taken while working in PTC Laboratory	**(7)**
Q-8		**Attempt all questions**	**(14)**
	a)	Write a note on explaining principle and application of suspension culture	**(7)**
	b)	Explain the procedure employed for somatic embryogenesis with the help of a labeled diagram	**(7)**