

C.U.SHAH UNIVERSITY

Winter Examination-2015

Subject Name : Plant Biotechnology

Subject Code : 4LS03BOT1/4SC03PBT1

Branch : B.Sc (Life Science)

Semester : 3

Date : 3/12/2015

Time : 2:30 To 5:30

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 plant biotechnology?	1
	b) Define protoplast	1
	c) Define callus	1
	d) What is plant tissue culture?	1
	e) What is surface sterilization?	1
	f) Define somatic embryogenesis	1
	g) What are transgenic plants?	1
	h) Which enzymes are used to develop protoplasts?	1
	i) Which are the ideal parameters for plant tissue culture in PTC lab?	1
	j) What is electroporation?	1
	k) Which type of micro elements are used in PTC?	1
	l) Write down stages of micropropagation	1
	m) Which bacterium causes crown gall in plants?	1
	n) Which types of embryos are developed during somatic embryogenesis?	1

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

Q-2	Attempt all questions	(14)
	a Explain callus formation in detail	7
	b Explain micropropagation & its applications	7
Q-3	Attempt all questions	(14)
	a Write a note on laboratory organization in PTC	7
	b Explain sterilization of media in detail.	7
Q-4	Attempt all questions	(14)
	a Write a note on Applications of PTC in detail.	7
	b Explain major & minor elements & growth regulators which are used in PTC	7



Q-5	Attempt all questions	(14)
	a Write a note on in vivo genetic transformation in plants	7
	b Draw diagram of green house & explain its components & uses of it.	7
Q-6	Attempt all questions	(14)
	a Explain methods to develop transgenic plants.	7
	b Explain applications of transgenic plants	7
Q-7	Attempt all questions	(14)
	a Physical sterilization is more useful. Justify this statement graphically	7
	b Explain the history of PTC	
Q-8	Attempt all questions	(14)
	a Explain protoplast fusion and its preparation	7
	b Show differences between callus formation, micropropagation & protoplast fusion	7

