

**GUJARAT TECHNOLOGICAL UNIVERSITY****BE - SEMESTER-VIII(NEW) EXAMINATION – SUMMER 2019****Subject Code:2180402****Date:15/05/2019****Subject Name:Animal and Plant Biotechnology****Time:10:30 AM TO 01:00 PM****Total Marks: 70****Instructions:**

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

			MARKS
<b>Q.1</b>	(a)	Give examples of substrate surfaces for animal cell culture.	3
	(b)	Write in detail advantages of serum free media.	4
	(c)	Limitation and advantages of animal cell culture.	7
<b>Q.2</b>	(a)	What are feeder layers?	3
	(b)	What are the steps involved in warm and cold trypsinization?	4
	(c)	Write a note on artificial skin and artificial cartilage	7
<b>OR</b>			
<b>Q.3</b>	(c)	Describe about animal cell culture laboratory facilities with plan.	7
	(a)	Factors to be considered for tissue engineering.	3
	(b)	Write an account on application of endosperm culture	4
	(c)	Describe the procedure adopted in IVF in humans.	7
<b>OR</b>			
<b>Q.3</b>	(a)	What is micropropagation?	3
	(b)	Disadvantages of using serum in animal cell culture.	4
	(c)	Write short notes on haploid production.	7
<b>Q.4</b>	(a)	Write a short note on sterilization of explant.	3
	(b)	Name any four medias for animal cell culture and plant cell culture each.	4
	(c)	Explain the culture procedure for animal tissue culture.	7
<b>OR</b>			
<b>Q.4</b>	(a)	What are satellite RNAs?	3
	(b)	Write a note on pH and light requirement for plant tissue culture .	4
	(c)	Media component of plant tissue culture	7
<b>Q.5</b>	(a)	Name any four plant hormones and explain about any one of them.	3
	(b)	What is soma clonal variation?	4
	(c)	What is anther culture? Write its applications.	7
<b>OR</b>			
<b>Q.5</b>	(a)	What is callus?	3
	(b)	How will you develop salt-tolerant crop variety?	4
	(c)	What is PTC? Describe the typical laboratory organization for PTC with labelled diagram.	7

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