GUJARAT TECHNOLOGICAL UNIVERSITY BE - SEMESTER- III EXAMINATION – SUMMER 2015

Subject Code: 131402 Date: 09/0		t Code: 131402 Date: 09/06/2015	
Subject Name: Basic Food Microbiology Time:02.30pm-05.00pm Total Marks: Instructions:			
 Attempt all questions. Make suitable assumptions wherever necessary. Figures to the right indicate full marks. 			
Q.1	(a) (b)	Describe the difference between prokaryotes and eukaryotes. Describe the contributions of Louis Pasteur in the field of microbiology.	07 07
Q.2	(a)	Describe any three dairy products along with the role of microorganisms in	07
	(b)	preparation of each product. Describe the contributions of Robert Koch. Enlist the Koch postulates which help in establishing a causative of a particular disease. OR	07
	(b)	Describe the growth phases of bacterial growth. Why the growth curve is known as S-shaped/sigmoid curve?	07
Q.3	(a) (b)	Draw a diagram to depict steps of transduction. Describe various methods of to control microorganisms using any physical and chemical agents. OR	07 07
Q.3	(a) (b)	Describe various methods of preservation of microorganisms. Describe the steps of western blotting technique	07 07
Q.4	(a)	Describe Griffith experiment to demonstrate bacterial transformation of "R" into "S" strain.	07
	(b)	How serological characteristics are used in ELISA? What is the role of primary and secondary antibody in ELISA	07
Q.4	(a)	OR What is plasmid? How plasmids are transferred from one bacterium to another	07
	(b)	through conjugation? Draw a diagram to depict a typical PCR cycle. What is the significance of Taq polymerase?	07
Q.5	(a)	Describe the role of intrinsic and extrinsic parameters affecting microbial growth in foods	07
	(b)	Enlist various fermented foods and microorganisms used to prepare the fermented foods in tabular form	07
Q.5	(a)	OR Describe the steps of negative staining. How negative staining is useful than a	07
	(b)	heat fixed smear required for conventional staining methods? Draw a diagram to depict serial dilution and spread plating.	07
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