Seat No.:	Enrolment No.

GUJARAT TECHNOLOGICAL UNIVERSITY BE - SEMESTER-III EXAMINATION - SUMMER 2016

Date: 09/06/2016

Subject Code: 131402

Subject Name:Basic Food Microbiology 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. (a) Describe the difference between gram +ve bacteria and gram -ve bacteria. 07 **Q.1** Justify he statement "Louis Pasteur is aptly known as Father of Microbiology". 07 **07 Q.2** Describe the difference between prokaryotes and eukaryotes. (a) (b) Describe the contributions of Robert Koch. Enlist the Koch postulates which 07 help in establishing a causative of a particular disease. (b) Describe the growth phases of bacterial growth alongwith a typical growth 07 curve diagram. Draw a diagram to depict steps of transduction. What is the difference between 0.3 **07** generalized and specialized transduction? (b) Describe any three physical and chemical methods used to control **07** microorganisms. OR0.3 (a) Describe morphology of microorganisms in reference to shape, arrangement, 07 flagella. Also draw diagram wherever necessary. (b) Using a schematic diagram, describe the steps of western blotting technique. 07 For which substance, northern blotting is used? Bacteria are transformed from R strain to S strain by transformation. Explain 0.4 07 the concept with experiment conducted by Griffith. (b) Draw a flowchart to depict the steps of ELISA. Write the full form of ELISA 07 and function of secondary antibody. **Q.4** Describe steps of bacterial DNA exchange by conjugation using a well labelled 07 diagram. (b) Draw a diagram to depict a typical PCR cycle. What is the significance of 07 primers and Taq polymerase? (a) Describe the role of intrinsic and extrinsic parameters affecting microbial **Q.5** 07 growth in foods (b) A typical bacterial cell increases from one cell to 256 cells in 10 hours. What is 07 the generation time of this organism? OR (a) Describe significance of probiotics. Name any three probiotic microorganisms Q.5 07 and any two probiotic food products available in Indian market. (b) Draw a diagram to depict parts of compound bright field microscope.. 07
