Seat No.:	Enrolment No

GUJARAT TECHNOLOGICAL UNIVERSITY

Sub	ject	ME - SEMESTER Code: 745001	–IV • EXAMINA		ER 2015 01/05/2015		
Tim	-	Name: QUALITY E 30 pm to 5:00 pm	NGINEERIN		ACTURING Marks: 70		
Histi	1. 2.	Attempt all questions. Make suitable assumption Figures to the right indica		sary.			
Q.1	(a) (b)	Explain the concept of Quality and Taguchi loss function. Explain the process of Design of Experiments.					
Q.2	(a) (b)	Explain different type of strategies in Orthogonal array. Explain L4 Orthogonal array with suitable example. OR					
	(b)	Explain L9 Orthogonal a			07		
Q.3	(a) (b)	What is ANOVA? Explain the procedure for One way ANOVA. What is F test? Explain its importance and critique in ANOVA.					
Q.3	(a) (b)	OR Explain different types of Noise factors. How these can be control? Explain different S/N Ratios.					
Q.4	(a) (b)	Explain the concept of tolerance design using the loss function. What are Alpha and Beta mistakes? Show its importance in ANOVA. OR					
Q.4	(a) (b)	Explain Measurement system Parameter Design. What values would component levels assume in a two and Three level Tolerance Design experiments if the following nominal and standard Deviations were available?					
		Component A B C	Nominal 1.250 inch 1.254 1.500	Std.Deviation 0.002 inch 0.002 0.003			
Q.5	(a) (b)	Explain different ISO 9000 Standards in brief. Explain Fish bone diagram with a suitable example.					
Q.5	(a) (b)	OR Explain the concept of (i) Six Sigma (ii) Bench Marking. Explain the concept of Quality circles.				07 07	
