Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

ME - SEMESTER IV (NEW) – EXAMINATION – SUMMER - 2017

Subject Code: 2745003 **Date:03/05/2017**

Subject Name: Lean Manufacturing System and Implementation

Time:02:30PM-05:00 PM **Total Marks: 70**

Instructions:

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

Q.1	**(a)**	What is Lean Manufacturing? Explain its Principles in detail	**07**
	(b)	Explain in brief Conventional Manufacturing versus Lean Manufacturing	**07**
Q.2	**(a)**	What are the ways to achieve pull production system. Is pull system same as JIT? Justify	**07**
	(b)	Explain the features and benefits of Kanban system.	**07**
		OR	
	(b)	What are the basic tools of lean manufacturing?	**07**
Q.3	**(a)**	Compare cellular manufacturing with flow line system	**07**
	(b)	Enlist the needs of TQM in industry	**07**
		OR	
Q.3	**(a)**	Discuss in details about the technology used for setup time reduction.	**07**
	(b)	Explain the role of TPM in lean manufacturing system. Enlist the pillars of TPM system and clearly describe any two of them.	**07**
Q.4	**(a)**	Explain 5s concept and its steps.	**07**
	(b)	What is Value Stream Mapping(VSM)? Explain with it's principles	**07**
		OR	
Q.4	**(a)**	Explain the logistics lean implementation frameworks	**07**
	(b)	Lean systems maintain inventory in small lot sizes .Comment	**07**
Q.5	**(a)**	Discuss the five primary elements of Lean manufacturing	**07**
	(b)	What do the following terms mean: (i)Fishbone Diagram (ii)Kaizen (iii).Poka Yoke (iv)Heijunka	**07**
		OR	
Q.5	**(a)**	Explain in Enablers and Barriers of Lean implementation	**07**
	(b)	Describe the natural progression of changes that may seen in a manufacturing System as it is gradually converted to a lean system. justify the answer by means any case study.	**07**

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