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Reg. No.:					

## **Question Paper Code: 55P19**

## M.E. DEGREE EXAMINATION, MAY 2018

Elective

## CAD / CAM

## 15PCD519 - LEAN MANUFACTURING

(Regulation 2015)

Duration: Three hours	Maximum: 100 Marks		
Answer ALL Questions			
PART - A (5 x $20 = 100 \text{ Marks}$ )			
1. (a) (i) Compare mass and lean production.	CO1- U (	10)	
(ii) What are the different forms of waste(muda)? What are traditional ways to minimize them.	the CO1- U (	10)	
Or			
(b) Explain the revolution of lean production in detail.	CO1- U (2	20)	
2. (a) Explain TPM process in detail and brief the machine loss pyramid in detail.	CO2-U (	20)	
Or			
(b) Explain TPM process in detail.	CO2- U (2	20)	
3. (a) Explain the types of kanban and the six kanban rules in deta	nil. CO3- U (2	20)	
(b) What is value stream mapping? explain it in detail.	CO3-U (	20)	

4.	(a)	(i) What are the various methods to achieve Poka-Yoke. Explain in detail.	CO4- U	(15)
		(ii) List and explain the various issues in implementing JIDOKA.	CO4- U	(5)
		Or		
	(b)	What are the types of detection methods of poke-yoke . Explain it in detail.	CO4- U	(20)
5.	(a)	(i) What is Hoshin planning and focus of hoshin planning.	CO5-Ana	(5)
		(ii) Discuss the different phases of hoshin planning system.	CO5-Ana	(15)
		Or		
	(b)	Discuss lean culture in detail.	CO5-Ana	(20)