

E

Reg. No. :

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Question Paper Code: 55P19

M.E. DEGREE EXAMINATION, APRIL 2019

Elective

CAD / CAM

15PCD519 - LEAN MANUFACTURING

(Regulation 2015)

Duration: Three hours

Maximum: 100 Marks

Answer ALL Questions

PART - A (5 x 20 = 100 Marks)

1. (a) (i) What circumstances necessitate lean production? Why CO1- U (5)
(ii) Explain about the basic image of lean production. Explain it in detail CO1- U (15)
Or
- (b) Explain Muda in detail. Differentiate muda ,mura and muri with example. CO1- U (20)
2. (a) Explain 5s system in detail. CO2-U (20)
Or
- (b) What is standardized work and its elements? Analyze the benefits of standardized work. CO2- U (20)
3. (a) What is JIT. Explain the components of JIT in detail. CO3- U (20)
Or
- (b) What is value stream mapping ? explain it in detail. CO3-U (20)
4. (a) (i) What are the common errors in poke-yoke. CO4- U (10)
(ii) what are the two types of action will taken in poka-yoke when it detects an error. CO4- U (10)
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. CO4- U (5)
- (ii) Explain the different phases of hoshin planning system. CO4- U (15)
- Or
- (b) **Explain the Hoshin Planning System in detail.** CO4- U (20)
-