Register Number:……..

KUMARAGURU
college of technology
character is life

B.E DEGREE EXAMINATIONS: APRIL / MAY 2023

(Regulation 2018)

Seventh Semester

MECHANICAL ENGINEERING

U18MEE0015: Lean Manufacturing

COURSE OUTCOMES

CO1: Apply the basic concepts of lean manufacturing
CO2: Apply forecasting systems and supply chain management concept for effective operational decision making
CO3: Apply capacity planning for managing multistage production system
CO4: Apply the concepts of pull production systems for better manufacturing performance
CO5: Apply JIT philosophy to improve product flow
CO6: Apply theory of constraints for shop scheduling and shop floor control

Time: Three Hours **Maximum Marks: 100**

Answer all the Questions: -
PART A (10 x 2 = 20 Marks)
(Answer not more than 40 words)

1.	Define Lean Production.	CO_1	[K_1]
2.	Infer about Product demand life cycle in lean manufacturing.	CO_1	[K_2]
3.	State any four functions of Aggregate planning?	CO_2	[K_1]
4.	Outline the importance of Planning tradeoffs.	CO_2	[K_1]
5.	What do you understand about Load reports in multistage production systems?	CO_3	[K_1]
6.	Write down the any four Limitations of MRP.	CO_3	[K_2]
7.	Define Bull Whip Effect?	CO_4	[K_1]
8.	Write down the four major categories of changes in JIT?	CO_4	[K_1]
9.	What is meant by theory of constraints?	CO_6	[K_1]
10.	List out any four advantages about Flexible manufacturing systems (FMS).	CO_5	[K_1]

Answer any FIVE Questions:-
PART B (5 x 16 = 80 Marks)
(Answer not more than 400 words)

11.	a)	Brief the role of inventory and information in Lean Manufacturing.	6	CO1	[K_2]
	b)	Explain the importance and principles of Production System elaborately.	10	CO1	[K_2]

12.	a)	Elaborate about Product design and customization.	8	CO2	[K_2]
	b)	State the purpose and importance of forecast in industry.	8	CO2	[K_2]
13.	a)	Infer about Capacity Planning and its importance.	8	CO3	[K_2]
	b)	Brief about Lot Sizing decisions	8	CO3	[K_2]
14.	a)	Explain about JIT in production systems.	8	CO4	[K_2]
	b)	What do understand about KANBAN system and list out its types.	8	CO4	[K_2]
15.	a)	Explain scheduling system requirements and its goals in detail.	8	CO5	[K_2]
	b)	Brief about flow shop scheduling.	8	CO5	[K_2]
16.	a)	Write short notes on Flexible manufacturing systems.	8	CO6	[K_2]
	b)	Discuss about Tool management system in shop floor control.	8	CO6	[K_2]

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