Register Number:……..

KUMARAGURU
college of technology
character is life

B.E/B.TECH DEGREE EXAMINATIONS: NOV /DEC 2024

(Regulation 2018)

Sixth 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

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.	What are the major functions of Marketing unit?	CO1	[K_1]
2.	Outline the concept of Lean Manufacturing.	CO1	[K_2]
3.	Illustrate the purpose of Forecasting.	CO2	[K_1]
4.	Define Planning Tradeoffs.	CO2	[K_2]
5.	Outline the role of Materials Requirement Planning.	CO3	[K_2]
6.	Define Inventory cost and give example.	CO3	[K_2]
7.	What do you mean by Pull Production?	CO4	[K_1]
8.	List out the six practices of Kanban.	CO5	[K_1]
9.	Summarize the advantages and disadvantages of JIT.	CO6	[K_2]
10.	Define shop scheduling.	CO6	[K_1]

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

11.	a)	Discuss Product demand life cycle with a real time example.	8	CO1	[K_3]
	b)	Explain the various functional areas of a firm.	8	CO1	[K_2]
12.	a)	Explain three main approaches for Qualitative Forecasting.	8	CO2	[K_2]
	b)	Discuss on vendor selection and contracting.	8	CO2	[K_3]
13.	a)	Discuss on steps involved in Materials Requirements Planning for a manufacturing industry.	8	CO3	[K_3]
	b)	Consider a manufacturing industry and explain various types of inventories involved in it.	8	CO3	[K_2]
14.	a)	Illustrate Constant Work in Process Pull alternative (CONWIP).	8	CO4	[K_2]
	b)	Discuss the Kanban scheduling with suitable example.	8	CO4	[K_3]
15.	a)	Discuss on Scheduling system requirements.	8	CO5	[K_2]
	b)	Describe the JIT system for improving the production environment.	8	CO5	[K_2]
16.	a)	Demonstrate the Shop Floor Control System architecture with suitable example.	8	CO6	[K_3]
	b)	Discuss on Flexible Manufacturing Systems with its basic components.	8	CO6	[K_2]

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