Register Number:……..

KUMARAGURU
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B.E DEGREE EXAMINATIONS: NOV/DEC 2024

(Regulation 2018)

Sixth Semester

AUTOMOBILE ENGINEERING

U18AUT6004**:** Total Quality Management and Project Management

COURSE OUTCOMES

CO1: Relate quality concepts and philosophies of TQM
CO2: Apply TQM tools as a means to improve quality
CO3: Select the lean six sigma tools for improving the productivity
CO4: Categorize the structure of the organization
CO5: Identify competency in project planning, scheduling and related activities
CO6: Develop network models and analyze the cost accounting

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

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

1.	Suggest the barriers to be avoided in the process of implementing TQM.	CO1	[K_2]
2.	Explain the concept of continuous improvement in TQM	CO1	[K_2]
3.	Define benchmarking and its importance in TQM.	CO2	[K_2]
4.	List the challenges in implementing JIT in a manufacturing system.	CO2	[K_2]
5.	Mention the key steps in the Kaizen cycle for continuous improvement.	CO3	[K_2]
6.	List the five steps of the 5S methodology	CO3	[K_2]
7.	Mention the primary responsibilities of a project manager in a project organization.	CO4	[K_2]
8.	Explain the significance of crashing in project management.	CO5	[K_2]
9.	Explain the purpose of PERT in project management	CO5	[K_2]
10.	Define the concept of the critical path in CPM.	CO6	[K_2]

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

11.	Using an Example describe the various dimensions of quality with respect to Quality of Product and Quality of service in automotive industry.	16	CO1	[K_2]
12.	A growing automobile manufacturer recently identified quality issues in their	16	CO2	[K_3]

	latest electric vehicle (EV) model. Customers have reported concerns related to battery performance, software glitches, and overall vehicle reliability. Using the New Seven Management Tools for the given scenario explain the Process to improve the Quality of the Automotive Manufacturing Company.			
13.	Analyze the impact of 5S, Kaizen, and Just-in-Time on waste reduction and productivity improvement in the automotive industry. Provide a detailed explanation with real-world examples	16	CO3	[K_3]
14.	Formulate an automotive project involved in component manufacturing using PERT and analyze the key steps involved in project formulation and scheduling	16	CO5	[K_3]
15.	Discuss the Role of senior Management in the implementation of ISO 9001 Quality systems.	16	CO4	[K_2]
16.	Explain the concept of the Line of Balance (LOB) technique in project scheduling and how it is applied in the automotive industry for synchronizing production and reducing costs.	16	CO6	[K_2]

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