



B.E DEGREE EXAMINATIONS: APRIL / MAY 2023

(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. Define the term quality for a typical product. | CO1 | [K ₂] |
| 2. How quality of a product and its cost are related? | CO2 | [K ₂] |
| 3. List any two barriers to TQM implementation. | CO2 | [K ₂] |
| 4. What is benchmarking of a product? | CO3 | [K ₂] |
| 5. What is the significance of six sigma in quality of a product? | CO3 | [K ₂] |
| 6. State the need for ISO 9000 in a quality system. | CO4 | [K ₂] |
| 7. Why documentation is an important parameter to improve product quality? | CO4 | [K ₂] |
| 8. What is a team? List the significance of forming team in a project? | CO5 | [K ₂] |
| 9. List any two essential requirements of project management software. | CO5 | [K ₂] |
| 10. What are the factors involved in cost analysis of the project. | CO6 | [K ₂] |

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

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|--|----|-----|-------------------|
| 11. a) Compare Juran's and Deming's approaches for TQM implementation. | 10 | CO1 | [K ₂] |
| b) Elaborate customer perception of quality in the product. | 6 | CO1 | [K ₂] |

12. a) Explain any four methods with example for customer retention. 8 CO2 [K₃]
 b) Explain any two continuous process improvement techniques. 8 CO2 [K₃]
13. a) Elaborate the seven tools of quality in detail. 10 CO3 [K₂]
 b) Differentiate between Quality Policy Deployment (QPD) and Quality Function Deployment. 6 CO3 [K₂]
14. a) Elaborate the elements of ISO 9001:2008 Quality System. 10 CO4 [K₂]
 b) List any six challenges faced during Implementation of Quality System. 6 CO4 [K₂]
15. a) Explain the taxonomy of projects in project management. 8 CO5 [K₂]
 b) Elaborate the types of contracts assigned in a typical project management. 8 CO5 [K₂]
16. a) A small project consisting of eight activities has the following characteristics: 10 CO6 [K₃]

Time – Estimates (in weeks)

<i>Activity</i>	<i>Preceding activity</i>	<i>Most optimistic time (a)</i>	<i>Most likely time (m)</i>	<i>Most Pessimistic time (b)</i>
A	None	2	4	12
B	None	10	12	26
C	A	8	9	10
D	A	10	15	20
E	A	7	7.5	11
F	B,C	9	9	9
G	D	3	3.5	7
H	E,F,G	5	5	5

- (i) Draw the PERT network for the project.
 (ii) Prepare the activity schedule for the project.
 (iii) Determine the critical path.
 (iv) If a 30- week deadline is imposed, what is the probability that the project will be finished within the time limit?
- b) List any six components of capital Cost of a project. 6 CO6 [K₂]
