

Reg. No.

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**B. E / B. TECH.DEGREE EXAMINATIONS, MAY 2024**

Sixth Semester

**GE18052 – TOTAL QUALITY MANAGEMENT***(Mechanical Engineering)***(Regulation 2018 / 2018A)****TIME:3 HOURS****MAX. MARKS: 100**

- CO1** Students will be able to describe the evolution and concepts of quality and Quality management.
- CO2** Students will be able to Practice the Principles of TQM in work environment
- CO3** With industrial examples, student will be able to illustrate the process monitoring tools
- CO4** Students will apply the quality techniques of TQM in industries.
- CO5** With appropriate case studies, students will deploy the need of Quality Management systems in industries.

**PART- A(10x2=20Marks)**

(Answer all Questions)

	CO	RBT LEVEL
1. Write an example for quality statement.	1	2
2. List the elements of TQM.	1	2
3. Name any four methods of receiving customer complaints.	2	2
4. Compare: Reward and Recognition.	2	3
5. What is relationship diagram?	3	2
6. Compare: charts for variable and charts for attributes.	3	3
7. What are the six sections of a basic house of quality matrix?	4	2
8. What are the benefits of QFD?	4	3
9. Specify the objective of “Quality Policy”.	5	3
10. Mention the elements of ISO14000.	5	3

**PART- B (5x 14=70Marks)**

	Marks	CO	RBT LEVEL
11. (a) (i) Describe Deming’s philosophy of quality management.	(10)	1	2
(ii) Discuss the various dimensions of quality.	(4)	1	2
<b>(OR)</b>			
(b) (i) Describe Joseph M Juran’s contributions towards TQM.	(10)	1	2
(ii) What do you understand by the term Quality Planning?	(4)	1	2

<b>12. (a)</b>	<b>(i)</b> How would you summarize customer complaints, customer satisfaction and retention in details?	<b>(10)</b>	<b>2</b>	<b>3</b>
	<b>(ii)</b> Discuss the performance appraisal with suitable example.	<b>(4)</b>	<b>2</b>	<b>3</b>
	<b>(OR)</b>			
<b>(b)</b>	<b>(i)</b> Discuss the importance of employee involvement and motivation for enhancing quality.	<b>(10)</b>	<b>2</b>	<b>3</b>
	<b>(ii)</b> Write short note on: Supplier rating.	<b>(4)</b>	<b>2</b>	<b>3</b>
<b>13. (a)</b>	<b>(i)</b> Enumerate the Japanese 5S as applicable to services and manufacturing company.	<b>(10)</b>	<b>3</b>	<b>3</b>
	<b>(ii)</b> Describe Kaizen model and list their merits.	<b>(4)</b>	<b>3</b>	<b>3</b>
	<b>(OR)</b>			
<b>(b)</b>	<b>(i)</b> Apply cause and effect diagram to the following situation: Hotel owner get sudden increases in complaint about quality.	<b>(8)</b>	<b>3</b>	<b>3</b>
	<b>(ii)</b> Discuss the following statement: “PDCA cycle as an effective tool for continuous improvement”.	<b>(6)</b>	<b>3</b>	<b>3</b>
<b>14. (a)</b>	<b>(i)</b> Develop a house of quality for designing an electric vehicle.	<b>(10)</b>	<b>4</b>	<b>3</b>
	<b>(ii)</b> Define: “Taguchi’s Quality loss Function”.	<b>(4)</b>	<b>4</b>	<b>3</b>
	<b>(OR)</b>			
<b>(b)</b>	<b>(i)</b> Discuss in detail how voice of customer is transformed into technical and functional requirements by QFD.	<b>(10)</b>	<b>4</b>	<b>3</b>
	<b>(ii)</b> Mention the stages of FEMA.	<b>(4)</b>	<b>4</b>	<b>3</b>
<b>15. (a)</b>	<b>(i)</b> What is ISO9001:2015? State its scope and applications.	<b>(8)</b>	<b>5</b>	<b>4</b>
	<b>(ii)</b> List the core elements of QMS.	<b>(6)</b>	<b>5</b>	<b>4</b>
	<b>(OR)</b>			
<b>(b)</b>	<b>(i)</b> Brief the various elements of ISO14000 series.	<b>(8)</b>	<b>5</b>	<b>4</b>
	<b>(ii)</b> Elucidate the implementation of quality audit in an automobile industry.	<b>(6)</b>	<b>5</b>	<b>4</b>

**PART- C (1x 10=10Marks)**

(Q.No.16 is compulsory)

		Marks	CO	RBT LEVEL
<b>16.</b>	Interpret the essential steps for quality planning in manufacturing industry.	<b>(10)</b>	<b>1</b>	<b>4</b>

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