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**Gandhi Institute of Engineering and Technology University, Odisha, Gunupur  
(GIET UNIVERSITY)**

M.B.A. (Third Semester) Regular Examinations, November - 2025

**23MBASM23021 - Total Quality Management**

(MBA- SM)



Time: 3 hrs

Maximum: 60 Marks

**(The figures in the right hand margin indicate marks.)**

**PART – A**

**(2 x 5 = 10 Marks)**

Q.1. Answer *ALL* questions

- |   | CO # | Blooms<br>Level |
|---|------|-----------------|
| a. Define quality and explain its key dimensions with suitable examples.                                      | CO1  | K1              |
| b. Explain Philip B. Crosby's contributions to quality management, focusing on the concept of "Zero Defects." | CO2  | K2              |
| c. Briefly differentiate between Strategic Planning and Strategic Implementation in the context of quality.   | CO4  | K2              |
| d. What is a Control Chart and explain the significance of the Control Limits.                                | CO3  | K2              |
| e. Why QMS is required for a corporate ?  | CO6  | K2              |

**PART – B**

**(10 x 5 = 50 Marks)**

Answer *all the* questions

- |   | Marks | CO # | Blooms<br>Level |
|---|-------|------|-----------------|
| 2. a. Write short notes on Dr. Joseph Juran's Quality Trilogy.  | 5     | CO1  | K1              |
| b. Explain the philosophy of Total Quality Management (TQM) with suitable examples.   | 5     | CO2  | K2              |
| <b>OR</b>   |       |      |                 |
| c. Compare and contrast the quality philosophies of Deming, Juran, and Crosby with suitable examples.   | 10    | CO1  | K4              |
| 3. a. Explain the difference between Quality Assurance (QA) and Quality Control (QC), providing with example.   | 6     | CO1  | K4              |
| b. Apply the principles of Kaizen to improve a small-scale production process.  | 4     | CO2  | K2              |
| <b>OR</b>   |       |      |                 |
| c. Demonstrate how Six Sigma tools can be used to solve process variability problems.   | 5     | CO3  | K4              |
| d. Briefly analyze the interrelationship between strategic quality management and business excellence.  | 5     | CO5  | K4              |
| 4. a. Differentiate between Prevention Costs and Appraisal Costs, providing one relevant example for each type of cost.   | 5     | CO2  | K2              |
| b. A firm reduced external failure cost by 30% after implementing a quality improvement program costing ₹50,000. If external failure cost was ₹2,00,000 earlier, find the net saving and percentage improvement in total CoQ. | 5     | CO2  | K3              |
| <b>OR</b>   |       |      |                 |
| c. Explain the relationship between quality cost and total product cost. How can monitoring Cost of Quality improve profitability?  | 6     | CO2  | K3              |
| d. A textile company finds that after quality audits, appraisal costs increase from ₹50,000 to ₹80,000, but external failure costs drop from ₹1,20,000 to ₹70,000.  | 4     | CO2  | K3              |

Find the net effect on total CoQ and explain whether the investment is beneficial.

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|-------|--|---|-----|----|
| 5. a. | Discuss the construction and significance of a cause and effect diagram in identifying root causes.  | 5 | CO3 | K4 |
| b.    | Ten samples of size 5 have the following means and ranges:<br>$\bar{X} = [25, 26, 27, 24, 25, 26, 27, 28, 26, 25]$<br>$R = [3, 2, 4, 3, 2, 4, 3, 5, 4, 3]$<br>Prepare $\bar{\bar{X}}$ and <b>R charts</b> , and determine control limits using $A_2 = 0.577$ , $D_3 = 0$ , $D_4 = 2.115$ . | 5 | CO3 | K4 |

OR

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|-------|--|---|-----|----|
| c.    | Explain the use of scatter diagrams in detecting relationships between two quality characteristics.  | 5 | CO3 | K4 |
| d.    | A company observes that defect percentage (Y) seems related to temperature variation (X). Given data:<br>$X$ (°C): 20, 22, 24, 26, 28<br>$Y$ (% defects): 2, 3, 5, 7, 9<br>Plot a scatter diagram and interpret the correlation. | 5 | CO3 | K4 |
| 6. a. | Explain the concept and components of a Quality Management System (QMS) with suitable examples.  | 5 | CO5 | K2 |
| b.    | How does continuous improvement get integrated into ISO 9001 systems? Briefly explain.   | 5 | CO5 | K4 |

OR

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|----|---|---|-----|----|
| c. | How does ISO 9001 contribute to continuous improvement and customer satisfaction? | 5 | CO6 | K4 |
| d. | Discuss the steps involved in conducting a quality audit.                         | 5 | CO6 | K2 |

End of Paper