# SRM VALLIAMMAI ENGINEERING COLLEGE

## (An Autonomous Institution)

SRM Nagar, Kattankulathur – 603 203

## DEPARTMENT OF INFORMATION TECHNOLOGY
## &
## DEPARMENT OF ARTIFICIAL INTELLIGENCE & DATA SCIENCE
## &
## DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

## QUESTION BANK



## VII SEMESTER

## 1908003–SOFTWARE QUALITY MANAGEMENT

## Regulation – 2019

## Academic Year 2025 – 26(ODD SEMESTER)

## Open Elective II

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# SRM VALLIAMMAI ENGINEERING COLLEGE
## (AnAutonomousInstitution)

SRM Nagar, Kattankulathur –603203.

**DEPARTMENT OF IT, AI-DS & CSE**
**QUESTION BANK**

**SUBJECT     : SOFTWARE QULAITY MANAGEMENT**

**SEM / YEAR: VII Sem / IV Year**

| | UNIT I - Introduction To Software Quality | | |
|---|---|---|---|
| | Software Quality – Hierarchical models of Boehm and McCall – Quality measurement – Metrics measurement and analysis – Gilb's approach – GQM Model | | |
| | **PART – A** | | |
| Q.No | Questions | BT Level | Competence |
| 1. | What is quality? | BTL 1 | Remembering |
| 2. | Tell the insights of quality. | BTL 1 | Remembering |
| 3. | Recall the definition of quality proved by ISO. | BTL 1 | Remembering |
| 4. | List out the reasons which make computer software problematical. | BTL 1 | Remembering |
| 5. | Give the roles of stakeholders in software Development. | BTL 2 | Understanding |
| 6. | Interpret the conflicting views of Users and Designer. | BTL 2 | Understanding |
| 7. | Point out the five different views of quality. | BTL 2 | Understanding |
| 8. | Give the schematic hierarchical view of software quality. | BTL 2 | Understanding |
| 9. | What are the matrices associated with reliability. | BTL 1 | Remembering |
| 10. | List the three areas addressed by McCall's model. | BTL 1 | Remembering |
| 11. | What is the difference between reliability and Integrity. | BTL 1 | Remembering |
| 12. | Compare and contrast Predictive metrics and Descriptive metrics. | BTL 2 | Understanding |
| 13. | Outline the seven criteria for a good metric. | BTL 2 | Understanding |
| 14. | Interpret Mean Time to Failure and give the formula for MTTF. | BTL 2 | Understanding |
| 15. | Demonstrate the problem with metrics. | BTL 2 | Understanding |
| 16. | Compare and contrast simple scoring and weighted scoring. | BTL 2 | Understanding |
| 17. | Illustrate polarity profiling. | BTL 2 | Understanding |
| 18. | List the Gilb's attributes and sub attributes. | BTL 1 | Remembering |
| 19. | Infer and highlight the Dickson's classification of reliability criteria. | BTL 2 | Understanding |
| 20. | List the resource attributes highlighted byGilb | BTL 1 | Remembering |
| 21. | Relate your understanding of Transcendent Properties. | BTL 1 | Remembering |
| 22. | Tell the need for quality metrics. | BTL 1 | Remembering |
| 23. | Find out the need of GQM Model | BTL 1 | Remembering |
| 24. | Summarize an overview of three levels in GQM. | BTL 2 | Understanding |
| | **PART-B** | | |
| 1. | Give a brief account on the five different methods for measuring the overall quality of the system as mentioned by Watts.(13) | BTL 4 | Analyzing |
| 2. | Mention the classification of software metric. What makes a good metric?Analyze the different types of matrices based on the fundamental property on which they depend. (13) | BTL 4 | Analyzing |

| 3. | Analyze Gilbs Quality attributes with suitable example. (13) | BTL 4 | Analyzing |
|---|---|---|---|
| 4. | Develop an overview about Product Quality Metrics. (13) | BTL 3 | Applying |
| 5. | Discover the need of Function Point in Quality assessment and explain the five major components and characteristics which play a major role in calculation of FP? (13) | BTL 4 | Analyzing |
| 6. | Identify and experiment in detail the different views of quality. (13) | BTL 3 | Applying |
| 7. | Give an account on Polarity profiling with suitable example of your own. (13) | BTL 4 | Analyzing |
| 8. | Analyze about the schematic hierarchical model of quality based on practical studies. (13) | BTL 4 | Analyzing |
| 9. | Name and examine in detail any two models which you have studied to predict the quality of any software. (13) | BTL 4 | Analyzing |
| 10. | Identify the COQUAMO tools used for monitoring the quality of the product with suitable diagram and give an overview it. (13) | BTL 3 | Applying |
| 11. | Experiment in detail about In Process Quality Metrics and its importance in measuring the software quality. (13) | BTL 3 | Applying |
| 12. | Examine the McCall's quality model and assess the McCall's quality criteria with suitable example. (13) | BTL 4 | Analyzing |
| 13. | (i) Give an account on problem with metrics. (7) <br> (ii) Analyze Polority profiling with suitable example. (6) | BTL 4 | Analyzing |
| 14. | (i) Identify the Dicksons classification of reliability criteria. (7) <br> (ii)Choose and analyze any two quality attributes highlighted by Gilb. (6) | BTL 3 | Applying |
| 15. | Assess the behavior of Bohem Model and show the relationship between various criteria. (13) | BTL 5 | Evaluating |
| 16. | Evaluate the Goal Question Metric approach in software quality with suitable example. (13) | BTL 5 | Evaluating |
| 17. | With relevant example of your choice show how quality can be measured using different metrics. (13) | BTL 6 | Creating |

**PART – C**

| 1. | Compare and contrast the hierarchical models of Boehm and Mccall's. (15) | BTL 5 | Evaluating |
|---|---|---|---|
| 2. | Using the following data and phased weighting factor ,calculate the following (5+5+5) <br> a. Product Operation Weighted Mean <br> b. Product Transition Weighted Mean <br> c. Overall measure by PWF method. | BTL 5 | Evaluating |

| GROUP | CRITERIA | METRIC | WEIGHT | PWF |
|---|---|---|---|---|
| Proudct Operation | Usablity | 0.7 | 0.5 | 2/3 |
| | Security | 0.5 | 0.5 | |
| | Efficiency | 0.6 | 0.2 | |
| | Correctness | 0.7 | 0.5 | |
| | Reliability | 0.4 | 0.4 | |
| Product Transition | Maintainability | 0.8 | 0.4 | 1/3 |
| | Adaptability | 0.7 | 0.1 | |
| | Expandability | 0.7 | 0.1 | |

| 3. | Garvin's five view are not intended as exhaustive. What are the other views of quality might one consider. Discuss(15) | BTL 6 | Creating |

| | | | |
|---|---|---|---|
| 4. | How far does Perry's analysis of relationships tally with your own experience of computer systems? Has it been over taken by advances in technology? (15) | BTL 6 | Creating |
| 5. | Show how the Goal/Question/Metric (GQM) method is a proven technique used for goal oriented measure with a suitable example. (15) | BTL 6 | Creating |

| UNIT II - Software Quality Assurance |
|---|
| Quality tasks – SQA plan – Teams – Characteristics – Implementation – Documentation – Reviews and Audits |

| PART – A | | | |
|---|---|---|---|
| Q.No | Questions | BT Level | Competence |
| 1. | What are Quality tasks? | BTL 1 | Remembering |
| 2. | Define Software Quality Assurance. | BTL 1 | Remembering |
| 3. | List out the teams and their responsibilities. | BTL 1 | Remembering |
| 4. | Recall the special responsibilities of Technical Review Process. | BTL 1 | Remembering |
| 5. | Compare and contrast review and audit. | BTL 2 | Understanding |
| 6. | What makes Quality assurance work minimal? | BTL 1 | Remembering |
| 7. | Infer the need of SQA plan. | BTL 2 | Understanding |
| 8. | Interpret the ways of killing Quality Assurance. | BTL 2 | Understanding |
| 9. | Demonstrate the role of software Inspection. | BTL 2 | Understanding |
| 10. | Where SQA is used? | BTL 1 | Remembering |
| 11. | Infer the factors affecting SQA effort. | BTL 2 | Understanding |
| 12. | Summarize the elements of documentation. | BTL 2 | Understanding |
| 13. | llustrate about SSD. | BTL 2 | Understanding |
| 14. | Show the Documents Documentation plan worksheet | BTL 2 | Understanding |
| 15. | List the seven keys to leadership. | BTL 1 | Remembering |
| 16. | Tell the characteristics of Quality Assurance. | BTL 1 | Remembering |
| 17. | Illustrate the steps in Document distribution. | BTL 2 | Understanding |
| 18. | Tell about SRS and its importance. | BTL 1 | Remembering |
| 19. | Interpret the steps in audit process. | BTL 2 | Understanding |
| 20. | What are the components of quality assurance plan? | BTL 2 | Understanding |
| 21. | Outline the need of Walkthrough. | BTL 2 | Understanding |
| 22. | Recall the Reviewing description template | BTL 1 | Remembering |
| 23 | Give the importance of Document verification. | BTL 1 | Remembering |
| 24. | Outline about the need of action items. | BTL 2 | Understanding |
| PART – B | | | |
| 1. | Identify the role of Procedural description template and Action items. (13) | BTL 3 | Applying |
| 2. | Discover the objective and goal of a SQA Plan? Experiment it with a suitable example. (13) | BTL 4 | Analyzing |
| 3. | Construct how will you establish quality goals? Explain it. (13) | BTL 3 | Applying |
| 4. | Analyze the different types of Team structure. (13) | BTL 4 | Analyzing |
| 5. | Examine in detail the Quality tasks and responsibilities. (13) | BTL 4 | Analyzing |
| 6. | Analyze the management review process. (13) | BTL 4 | Analyzing |

| 7. | Examine in detail about the Documentation. (13) | BTL 3 | Applying |
|---|---|---|---|
| 8. | Examine in detail the CMM Compatibility of Reviews and audits. (13) | BTL 4 | Analyzing |
| 9. | Experiment the candidate work products for review? Schematically organize and show the review process model with proper justification. (13) | BTL 3 | Applying |
| 10. | (i) Identify the roles and responsibilities of a SQA team. (7) (ii) Organize the work products that will be reviewed and audited by a SQA auditor. (6) | BTL 3 | Applying |
| 11. | Illustrate the Technical Review process in detail. (13) | BTL 3 | Applying |
| 12. | (i)Analyze the similarity and dissimilarity in document verification and validation. (7) (ii) Discover the factors affecting SQA effort. (6) | BTL 4 | Analyzing |
| 13. | Examine the need of software inspection process in determining the quality of a software product. (13) | BTL 4 | Analyzing |
| 14. | Identify the need and importance of audit process. (13) | BTL 3 | Applying |
| 15. | Determine the steps and importance of technical review process. (13) | BTL 5 | Evaluating |
| 16. | Evaluate the importance of walkthrough and justify why it is needed in quality evaluation. (13) | BTL 5 | Evaluating |
| 17. | Discuss about the types of review. (13) | BTL 6 | Creating |
| **PART – C** | | | |
| 1. | For removing bugs from code,would review or testing be more effective.Evaluate the reason behind your answer. (15) | BTL 5 | Evaluating |
| 2. | Explain the following a. Document verification. (8) b. The Audit process (7) | BTL 5 | Evaluating |
| 3. | Create your own example to show why Quality Assurance plan is important for software companies. (15) | BTL 6 | Creating |
| 4. | Formulate the best practices to be followed while creating a SQA plan. (15) | BTL 6 | Creating |
| 5. | Elaborate on the key aspects that an QA team should focus on to prepare an SQA plan. (15) | BTL 6 | Creating |

| UNIT III – Quality Control and Reliability | | | |
|---|---|---|---|
| Tools for Quality- Ishikawa's basic Tools – CASE Tools – Defect Prevention and Removal – Reliability Models – Rayleigh model – Reliability growth models for quality Assessment | | | |
| **PART – A** | | | |
| Q.No | Questions | BT Level | Competence |
| 1. | List out the basic Quality Tools available in Software Development. | BTL 1 | Remembering |
| 2. | Write short notes on pareto diagram | BTL 1 | Remembering |
| 3. | Write short notes on histogram. | BTL 1 | Remembering |
| 4. | Write short notes on checklist. | BTL 1 | Remembering |
| 5. | What is Run Charts? | BTL 1 | Remembering |
| 6. | List the purpose of Cause and Effect Diagram. | BTL 1 | Remembering |
| 7. | How to find error detection efficiency? | BTL 1 | Remembering |
| 8. | How to find Early Detection Percentage? | BTL 1 | Remembering |
| 9. | Define Ishikawa's basic tools for quality assessment. | BTL 1 | Remembering |
| 10. | Define Software reliability model. | BTL 1 | Remembering |
| 11. | Write the formula for CDF. | BTL 1 | Remembering |
| 12. | Write the formula for PDF. | BTL 1 | Remembering |
| 13. | Define Reliability growth models. | BTL 1 | Remembering |
| 14. | Write short notes on Littlewood Models. | BTL 1 | Remembering |
| 15. | List the criteria for model Evaluation. | BTL 1 | Remembering |
| 16. | Define Rayleigh model. | BTL 1 | Remembering |
| 17. | Draw the cause and effect Diagram for software Development. | BTL 2 | Understanding |
| 18. | Draw the Fishbone Diagram for software Development. | BTL 2 | Understanding |
| 19. | What is DPP? | BTL 1 | Remembering |
| 20. | Why is software testing essential in defect prevention? | BTL 2 | Understanding |
| 21. | What is CMM? | BTL 1 | Remembering |
| 22. | Define Phase Based Defect Removal Model. | BTL 1 | Remembering |
| 23 | What is Failure Rate (FR)? | BTL 1 | Remembering |
| 24. | Write notes on the delayed S and Inflection S models. | BTL 1 | Remembering |
| **PART – B** | | | |
| 1. | Discuss in detail about Pareto diagram and Histogram. (13) | BTL 6 | Creating |
| 2. | Discuss in detail about check list and Run charts. (13) | BTL 6 | Creating |
| 3. | Explain in details about cause and effect diagram. (13) | BTL 5 | Evaluating |
| 4. | Discuss in detail about error detection. (13) | BTL 6 | Creating |
| 5. | Explain the process of defect prevention in software development. Provide examples. | BTL 6 | Creating |
| 6. | How can a Histogram be used to analyze the distribution of process data and identify areas for improvement? (13) | BTL 5 | Evaluating |
| 7. | Explain about Software Relaibility Model. (13) | BTL 5 | Evaluating |
| 8. | Discuss in detail about CDF and PDF. (13) | BTL 6 | Creating |
| 9. | Discuss about Reliability growth models. (13) | BTL 6 | Creating |
| 10. | Discuss about the Littlewoods model with suitable diagram. (13) | BTL 5 | Evaluating |
| 11. | Explain about Rayleigh model. (13) | BTL 5 | Evaluating |
| 12. | Discuss in detail about Defect prevention. (13) | BTL 6 | Creating |

| 13. | Describe about quality Assessment. (13) | BTL 3 | Applying |
|---|---|---|---|
| 14. | Discuss in detail about the benefits of Reliability growth model. (13) | BTL 6 | Creating |
| 15. | Discover the defects prevention activities in detail. (13) | BTL 4 | Analyzing |
| 16. | Discuss the challenges and benefits of implementing a defect prevention program in an organization. (13) | BTL 6 | Creating |
| 17. | Determine the Characteristics of a Successful CASE Tool in detail. (13) | BTL 5 | Evaluating |
| PART – C | | | |
| 1. | Explain the basic quality tools available in software development. (15) | BTL 5 | Evaluating |
| 2. | Discuss in details about CASE Tools. (15) | BTL 6 | Creating |
| 3. | Discuss the Ishikawa's basic Tools with suitable diagram. (15) | BTL 6 | Creating |
| 4. | Elaborate the Traditional development SDLC vs Case Tool assisted SDLC with suitable example. (15) | BTL 5 | Evaluating |
| 5. | Evaluate and compare the various models available in defect prevention. (15) | BTL 5 | Evaluating |

| UNIT-IV – Quality Management System | | | |
|---|---|---|---|
| Elements of QMS – Rayleigh model framework – Reliability Growth models for QMS – Complexity metrics and Models – Customer Satisfaction Analysis. | | | |
| PART – A | | | |
| Q.No | Questions | BT Level | Competence |
| 1. | What is the role of quality planning in a QMS? | BTL 1 | Remembering |
| 2. | Define quality assurance and give an example. | BTL 1 | Remembering |
| 3. | Why is documentation important in a QMS? | BTL 1 | Remembering |
| 4. | Briefly give key note on the concept of continuous improvement in a QMS. | BTL 2 | Understanding |
| 5. | Name two key components of a Quality Management System (QMS). | BTL 2 | Understanding |
| 6. | Outline the stages of the Rayleigh model for continuous improvement. | BTL 2 | Understanding |
| 7. | What metrics are used to measure the effectiveness of the Rayleigh model? | BTL 1 | Remembering |
| 8. | What is Rayleigh model? | BTL 1 | Remembering |
| 9. | What is the purpose of reliability growth models in software quality management? | BTL 1 | Remembering |
| 10. | Mention the steps involved in implementing a reliability growth program. | BTL 2 | Understanding |
| 11. | What are the benefits of using the Crow-AMSAA model in reliability growth?. | BTL 1 | Remembering |
| 12. | Define Cyclomatic Complexity and its significance. | BTL 1 | Remembering |
| 13. | Name a complexity metric that measures software size and complexity. | BTL 2 | Understanding |
| 14. | Write the formula for cyclomatic complexity. | BTL 1 | Remembering |
| 15. | List the advantages of cyclomatic complexity. | BTL 2 | Understanding |
| 16. | What is Functional Point Analysis (FPA) ? | BTL 1 | Remembering |
| 17. | Why is customer satisfaction analysis important in software quality management? | BTL 1 | Remembering |
| 18. | Outline the challenges in implementing the Rayleigh Model framework. | BTL 2 | Understanding |
| 19. | How can customer feedback be effectively analyzed in QMS? | BTL 2 | Understanding |

| 20. | Compare and contrast Quality Assurance and Quality Control in QMS. | BTL 2 | Understanding |
|---|---|---|---|
| 21. | Why is it important for QMS to focus on customer satisfaction? | BTL 1 | Remembering |
| 22. | How do complexity models help in QMS? | BTL 2 | Understanding |
| 23 | What are complexity metrics used to measure? | BTL 1 | Remembering |
| 24. | List two methods used for gathering customer feedback in QMS. | BTL 2 | Understanding |
| **PART – B** | | | |
| 1. | Critically analyze the role of Quality Planning in achieving organizational objectives within QMS. (13) | BTL 4 | Analyzing |
| 2. | Evaluate the effectiveness of reliability growth models in predicting and managing product reliability improvements in QMS. (13) | BTL 5 | Evaluating |
| 3. | Explain how complexity metrics and models contribute to managing system complexity in QMS. (13) | BTL 4 | Analyzing |
| 4. | Compare and contrast different reliability growth models used in QMS, highlighting their advantages and limitations. (13) | BTL 4 | Analyzing |
| 5. | Assess the impact of complexity on QMS processes and outcomes, with suitable examples. (13) | BTL 4 | Analyzing |
| 6. | Analyze the importance of customer satisfaction analysis in ensuring the success of QMS initiatives. (13) | BTL 4 | Analyzing |
| 7. | Evaluate the challenges and benefits of implementing the Rayleigh model framework in QMS practices. (13) | BTL 5 | Evaluating |
| 8. | Discuss the methods and techniques used for measuring and improving customer satisfaction in QMS. (13) | BTL 4 | Analyzing |
| 9. | Critically examine the relationship between quality control measures and continuous improvement in QMS. (13) | BTL 5 | Evaluating |
| 10. | Assess the role of reliability growth models in enhancing product quality and reliability in QMS. (13) | BTL 4 | Analyzing |
| 11. | Explain how complexity metrics can be integrated into QMS to manage and mitigate risks associated with system complexity. (13) | BTL 4 | Analyzing |
| 12. | Discuss the ethical considerations involved in conducting customer satisfaction analysis in QMS. (13) | BTL 4 | Analyzing |
| 13. | Evaluate the impact of complexity metrics on decision-making processes within QMS. (13) | BTL 5 | Evaluating |
| 14. | Compare the advantages and disadvantages of using different customer feedback mechanisms in QMS. (13) | BTL 4 | Analyzing |
| 15. | Critically evaluate the relevance of the Rayleigh Model framework in modern QMS practices. (13) | BTL 5 | Evaluating |
| 16. | Discuss the implications of system complexity on the overall quality management strategy in QMS. (13) | BTL 4 | Analyzing |
| 17. | Evaluate the effectiveness of reliability growth models in addressing customer satisfaction issues in QMS. (13) | BTL 5 | Evaluating |
| **PART – C** | | | |
| 1. | What are the essential elements of quality management system and discuss in detail. (15) | BTL 6 | Creating |
| 2. | Discuss in detail about the reliability growth models with suitable example. (15) | BTL 6 | Creating |
| 3. | Discuss the principles and components of the Rayleigh Model framework and their application in software quality management. (15) | BTL 5 | Evaluating |
| 4. | Analyze the factors influencing the choice of reliability growth models in different stages of product development within QMS. (15) | BTL 5 | Evaluating |
| 5. | Discuss the challenges and opportunities associated with implementing continuous improvement strategies in QMS. (15) | BTL 5 | Evaluating |

| UNIT V  - Quality Standards |
|---|
| Need for statements – ISO 9000 Series – ISO 9000-3 for Software development  - CMM and CMMI – Six Sigma Concepts |

| PART – A | | | |
|---|---|---|---|
| **Q.No** | **Questions** | **BT Level** | **Competence** |
| 1. | What is the purpose of the ISO 9000 Series? | BTL 1 | Remembering |
| 2. | Define ISO 9001 and its primary focus. | BTL 1 | Remembering |
| 3. | Distinguish bettween ISO 9000 and ISO 9001. | BTL 2 | Understanding |
| 4. | List two benefits of ISO 9000 certification for organizations. | BTL 2 | Understanding |
| 5. | What is ISO 9000-3 and its relevance to software development? | BTL 1 | Remembering |
| 6. | Name two key principles of ISO 9000-3. | BTL 2 | Understanding |
| 7. | Define CMM (Capability Maturity Model). | BTL 1 | Remembering |
| 8. | List two key process areas in CMM. | BTL 2 | Understanding |
| 9. | What is the difference between CMM and CMMI? | BTL 1 | Remembering |
| 10. | Define CMMI (Capability Maturity Model Integration). | BTL 1 | Remembering |
| 11. | List two improvements introduced by CMMI over CMM. | BTL 2 | Understanding |
| 12. | Define Six Sigma. | BTL 1 | Remembering |
| 13. | List two methodologies used in Six Sigma. | BTL 2 | Understanding |
| 14. | What is DMAIC in Six Sigma? | BTL 1 | Remembering |
| 15. | Define DFSS (Design for Six Sigma). | BTL 1 | Remembering |
| 16. | Outline the concept of "Process Capability" in Six Sigma. | BTL 2 | Understanding |
| 17. | What is the role of statistical analysis in Six Sigma? | BTL 1 | Remembering |
| 18. | Define Lean Six Sigma. | BTL 1 | Remembering |
| 19. | List two benefits of implementing Six Sigma in an organization. | BTL 2 | Understanding |
| 20. | What is the importance of data-driven decision-making in Six Sigma? | BTL 1 | Remembering |
| 21. | Define ISO 9000-3 in the context of software quality management. | BTL 1 | Remembering |
| 22. | List two process improvement models used in CMM. | BTL 2 | Understanding |
| 23 | How does CMMI address the limitations of CMM? | BTL 1 | Remembering |
| 24. | Illustrate the role of customer focus in ISO 9000. | BTL 2 | Understanding |
| PART – B | | | |
| 1. | Compare and contrast ISO 9000 and ISO 9001 standards, discussing their significance in quality management systems. (13) | BTL 4 | Analyzing |
| 2. | Critically analyze the implementation challenges of ISO 9000-3 in software development projects. (13) | BTL 5 | Evaluating |
| 3. | Evaluate the evolution of CMM from its initial stages to CMMI, emphasizing the improvements and benefits introduced. (13) | BTL 4 | Analyzing |
| 4. | Discuss the key principles and benefits of CMMI adoption in enhancing organizational processes and quality. (13) | BTL 4 | Analyzing |
| 5. | Assess the role of maturity levels in the CMM framework and their impact on organizational performance. (13) | BTL 4 | Analyzing |
| 6. | Analyze the integration of Lean principles into Six Sigma methodologies, highlighting their combined benefits in quality | BTL 4 | Analyzing |

| | | | |
|---|---|---|---|
| | management. (13) | | |
| 7. | Evaluate the importance of statistical tools and techniques in SixSigma methodologies for process improvement. (13) | BTL 4 | Analyzing |
| 8. | Discuss the DMAIC methodology in Six Sigma and its application in improving organizational processes. (13) | BTL 4 | Analyzing |
| 9. | Critically examine the challenges faced by organizations in implementing Six Sigma and strategies to overcome them. (13) | BTL 5 | Evaluating |
| 10. | Evaluate the role of leadership in driving successful implementation of six Sigma initiatives within an organization. (13) | BTL 5 | Evaluating |
| 11. | Analyze the impact of DFSS on product development and its alignment with overall business goals in Six Sigma. (13) | BTL 4 | Analyzing |
| 12. | Discuss the benefits and challenges of adopting a customer-focused approach in ISO 9000 standards. (13) | BTL 4 | Analyzing |
| 13. | Evaluate the effectiveness of ISO 9000-3 guidelines in improving software quality and customer satisfaction. (13) | BTL 5 | Evaluating |
| 14. | Compare the benefits of ISO 9000-3 versus other software quality standards in the industry. (13) | BTL 4 | Analyzing |
| 15. | Evaluate the ethical considerations involved in implementing Six Sigma practices in an organization. (13) | BTL 5 | Evaluating |
| 16. | Analyze the role of metrics and measurement in assessing organizational maturity levels under the CMMI framework. (13) | BTL 4 | Analyzing |
| 17. | Evaluate the impact of CMMI maturity levels on organizational culture and continuous improvement efforts. (13) | BTL 5 | Evaluating |
| **PART – C** | | | |
| 1. | Compare and contrast ISO 9000 and ISO 9001 standards, discussing their significance in quality management systems. (15) | BTL 5 | Evaluating |
| 2. | Explain in details about CMM . (15) | BTL 5 | Evaluating |
| 3. | Critically examine the application of Lean Six Sigma in reducing operational inefficiencies and improving customer satisfaction. (15) | BTL 6 | Creating |
| 4. | Discuss the evolution of Six Sigma from a quality management tool to a broader business strategy for organizational excellence. (15) | BTL 6 | Creating |
| 5. | Discuss in detail about six sigma concepts. (15) | BTL 6 | Creating |

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