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**Question Paper Code : 70736**

B.E./B.Tech. DEGREE EXAMINATIONS, NOVEMBER/DECEMBER 2023.

Fifth / Sixth / Seventh / Ninth Semester

Civil Engineering

GE 8077 – TOTAL QUALITY MANAGEMENT

(Common to : Aeronautical Engineering / Aerospace Engineering / Agriculture Engineering / Automobile Engineering / Biomedical Engineering / Computer Science and Engineering / Computer and Communication Engineering / Electrical and Electronics Engineering / Electronics and Communication Engineering / Electronics and Instrumentation Engineering / Electronics and Telecommunication Engineering / Environmental Engineering / Geoinformatics Engineering / Industrial Engineering / Industrial Engineering and Management / Instrumentation and Control Engineering / Manufacturing Engineering / Marine Engineering / Material Science and Engineering / Mechanical Engineering / Mechanical Engineering (sandwich) / Mechanical and Automation Engineering / Mechatronics Engineering / Medical Electronics / Petrochemical Engineering / Production Engineering / Robotics and Automation / Safety and Fire Engineering / Bio Technology / Biotechnology and Biochemical Engineering / Chemical Engineering / Fashion Technology / Food Technology / Handloom and Textile Technology / Information Technology / Petrochemical Technology / Petroleum Engineering / Pharmaceutical Technology / Plastic Technology / Polymer Technology / Textile Chemistry / Textile Technology)

(Regulations 2017)

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. State the benefits of quality management.
2. What is customer retention?
3. Indicate the significance of using PDCA cycle.
4. Define kaizen.
5. Name any two new management tools and give its uses.
6. What is pareto principle?

7. Why do we need quality circle in business organizations?
8. How to reduce cost of poor quality?
9. Define quality management system
10. Indicate the purpose of AS9100 quality standards

PART B — (5 × 13 = 65 marks)

11. (a) Compare and contrast the contributions of Deming and Crosby towards quality management.

Or

- (b) “Focusing on the customer makes a company more resilient”- Comment on the statement by describing the need for understanding customer focus, customer orientation and customer satisfaction. Illustrate.

12. (a) Discuss how employee involvement, motivation and empowerment drives total quality management.

Or

- (b) What do you understand by supplier partnership? Discuss how supplier selection and supplier rating is done.

13. (a) What is six sigma quality? Discuss its methodology and applications to service organizations.

Or

- (b) How to conduct a failure modes and effect analysis? Explain its steps.

14. (a) Give an overview about the Quality Function Deployment (QFD) process and benefits to a business organization

Or

- (b) Indicate the need for Total Productive Maintenance and describe the eight pillars TPM in detail.

15. (a) What are the basic requirements and structure of ISO 9001 quality standards? Explain.

Or

- (b) Describe the elements and requirements of ISO 14001 standards in detail.

PART C — (1 × 15 = 15 marks)

16. (a) In your experience, what are the product and service quality dimensions you have identified for the following :

Product : Mobile Phone, Car, refrigerator

Services : Restaurant, Health clinic, Bank service

Suggest some TQM approaches that might help these organizations to improve their product and services quality

Or

- (b) Why do organizations compare their performance with industry's best in class performance? Give any two examples for benchmarking and explain its process and types in detail.