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**Reg. No. :**

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**Question Paper Code: 99775**

B.E. / B.Tech. DEGREE EXAMINATION, NOV 2022

Open elective

Civil Engineering

19UME975– TOTAL QUALITY MANAGEMENT

(Common to CSE, ECE, EEE, EIE, IT, Chemical and biomedical engineering branches)

(Regulation 2019)

Duration: Three hours

Maximum: 100 Marks

Answer ALL Questions

PART A - (10 x 1 = 10 Marks)

- Which one is as of dimensions of product quality CO1- R  
(a) Assurance      (b) Reputation      (c) Tangibles      (d) Empathy
- “Quality is fitness for use”- defined by CO1- U  
(a) Juran      (b) Crosby      (c) Deming      (d) None of these
- Seiso means to CO2- R  
(a) Maintaining      (b) Cleaning      (c) Ordering      (d) Self-discipline
- Quality assurance is a function responsible for CO2- U  
(a) Controlling quality      (b) Managing quality  
(c) Inspections      (d) Removal of defects
- Seven basic tools of quality proposed by CO3- R  
(a) Ed. Deming      (b) Juan      (c) Crosby      (d) Kaoru Ishikawa
- The concept of zero inventory is called: CO3- R  
(a) Six sigma      (b) Continuous improvement      (c) Just in Time      (d) Zero defect
- Productivity means a CO4- R  
(a) output/input      (b) result/capital cost      (c) cost/efficiency      (d) growth/efficiency
- The goal of TPM is encouraging input from all CO4- R  
(a) managements      (b) employees      (c) customers      (d) services

9. Product realization is related to CO5- U  
 (a) product (b) process (c) quality (d) benchmarking
10. Industry specific standards use CO5- U  
 (a) ISO 9000 (b) ISO 14000 (c) ISO 22000 (d) None of these

PART – B (5 x 2= 10Marks)

11. Write the equation that would quantify quality CO1- U
12. What are quality statement? CO2- U
13. What is meant by bench marking? CO3- U
14. Explain Taguchi quality loss function. CO4- U
15. List out the main elements of ISO 14000. CO5- U

PART – C (5 x 16= 80Marks)

16. (a) Discuss about Various elements of TQM. CO1- U (16)  
 Or  
 (b) Explain Dimensions of service quality. CO1- U (16)
17. (a) What is PDSA cycle? Explain the phases of PDSA cycle with suitable illustrations. CO2- U (16)  
 Or  
 (b) Discuss the various steps in the development of performance appraisal system and team work. CO2- U (16)
18. (a) Explain six sigma process (DMAIC) and advantages of six sigma. CO3- U (16)  
 Or  
 (b) Explain the various steps in benchmarking process. CO3- U (16)
19. (a) Briefly explain the performance measures and its techniques to measure. CO4- U (16)  
 Or  
 (b) Describe Taguchi quality loss function in detail. CO4- U (16)
20. (a) With the aid of a pyramid of a pyramidal diagram, describe the documentation hierarchy stipulated in ISO 14001 standard. CO5- U (16)  
 Or  
 (b) Describe the concepts, requirements and documentation procedures in ISO 9000:2000. CO5- U (16)

