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Question Paper Code : 80749

B.E./B.Tech. DEGREE EXAMINATIONS, APRIL/MAY 2024.

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. List the seven deadly diseases of management.
2. Mention the contribution of Dr. J. Juran in TQM.
3. Write about PDCA cycle.
4. Name two theory that deals about employee involvement and motivation.
5. Write about some applications of scatter diagram.

6. What does DMAIC stand for? Write briefly about DMAIC.
7. State the objectives of performance measure.
8. State the need for Quality circle.
9. Write the types of quality audits.
10. List the various elements of QMS.

PART B — (5 × 13 = 65 marks)

11. (a) (i) Compare the American quality gurus (Dr. W.E. Deming, Dr J. Juran and Philip B Crosby) various approaches to quality. (7)
- (ii) Prepare customer satisfaction questionnaire for this service industry: Bank. (6)

Or

- (b) (i) Articulate how the philosophy of TQM has evolved through the contribution of many eminent quality gurus. (7)
 - (ii) Discuss most visible barriers of TQM implementation. (6)
12. (a) (i) Explain the role of quality council. (7)
 - (ii) Predict the Japanese philosophy that encourages continuous improvement. Explain your answers in detail. (6)

Or

- (b) Explain the process of supplier selection and supplier rating.
13. (a) (i) How do you create a process flow chart ? What are the flowchart symbols and its meaning? Explain in detail along with an example. (7)
 - (ii) List and explain the various glossary used for FMEA. (6)

Or

- (b) (i) What critics say about benchmarking activities? (7)
 - (ii) Explain six sigma quality. (6)
14. (a) Describe the house of quality for engineering product of your choice. Also explain the QFD methodology. (13)

Or

- (b) (i) Describe the relationship between cost of prevention + appraisal and failure costs according to Dr J Juran. (7)
- (ii) Explain the following with the diagram. (6)
- (1) Larger-the-better
- (2) Smaller-the-better
15. (a) (i) State the benefits of ISO registration. (7)
- (ii) Draw the documentation pyramid. Explain in detail. (6)

Or

- (b) Explain and compare the features of the following : (13)
- ISO14000 and its related standards
- ISO 9000 series standards

PART C — (1 × 15 = 15 marks)

16. (a) According to Dr W.E. Deming, "Adopting the new philosophy, has been a major driver the way business is done. It is about leading the business rather than managing". In this line of thought, could you explain any two examples of how a conventional business has changed to in current scenario due to explosion of technologies/disruptive innovation? (15)

Or

- (b) Do you think NOKIA, failed to foresee the future of Mobile Industry? Compose your answers based on TQM framework that you have studied.