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Question Paper Code : 90697

B.E./B.Tech. DEGREE EXAMINATIONS, NOVEMBER/DECEMBER 2022.

Fifth/Sixth/Seventh/Ninth Semester

Aeronautical Engineering

GE 8077 – TOTAL QUALITY MANAGEMENT

(Common to: Aerospace Engineering/ Agriculture Engineering/ Automobile Engineering/ Biomedical Engineering/ Civil 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/ Bio Technology/ 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. Give the basic concepts of TQM.
2. What is meant by customer retention and mention its importance?
3. Mention the conditions necessary for empowerment.

4. Define "Performance appraisal" and mention the uses of performance appraisal.
5. Indicate the factors that distinguish six sigma concepts from traditional quality management concepts.
6. What is meant by Failure Mode and Effect analysis?
7. Specify the big loss avoided by TQM.
8. What is meant by "House of quality"?
9. List out the global benefits of adopting ISO 9000 quality system.
10. What are the various product evaluation standards of ISO 14000?

PART B — (5 × 13 = 65 marks)

11. (a) Explain the various dimension of product quality and service quality with suitable examples.
Or
(b) What is customer complaint? Give the various methods/tools used for collecting customer complaints and explain each one in detail.
12. (a) Explain the phases of PDCA cycle with suitable illustration.
Or
(b) What is team? Discuss different types of team and stages of team development and list the characteristics of a successful team.
13. (a) Explain the seven basic tools of quality with the help of neat diagram and mention when do we use it?
Or
(b) What is mean by Benchmarking? Explain the Benchmarking process and its types and mention the benefits of benchmarking for an organization.
14. (a) What are all the goals of TPM? Draw and explain the eight pillars of TPM and mention its benefits for the manufacturing industry.
Or
(b) Explain measures of performance in evaluating the success of an organization. Also discuss the techniques for presenting performance measures.

15. (a) Discuss the various elements of ISO 9000-2000 quality system.

Or

- (b) Write brief notes on Quality Auditing in QMS.

PART C — (1 × 15 = 15 marks)

16. (a) Write the fourteen steps of Deming's philosophy for improving quality, productivity and competitiveness. Explain each step with a suitable engineering example.

Or

- (b) Explain the features of ISO 14000 and explain the procedure to obtain ISO 14000 certification for the Fertilizer manufacturing company.
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