Reg. No. | | | | | | | | | | | | |

02/11/16

Question Paper Code : 80508

B.E./B.Tech. DEGREE EXAMINATION, NOVEMBER/DECEMBER 2016.

Seventh Semester

Mechanical Engineering

GE 6757 — TOTAL QUALITY MANAGEMENT

(Common to Sixth Semester Industrial Engineering and Management, Mechatronics Engineering, Information Technology, Pharmaceutical Technology, Computer Science and Engineering and Also Common to Seventh Semester Aeronautical Engineering, Biomedical Engineering, Industrial Engineering, Manufacturing Engineering, Materials Science and Engineering, Mechanical and Automation Engineering, Medical Electronics Fashion Technology, Petrochemical Engineering, Production Engineering, Polymer Technology)

(Regulations 2013)

Time : Three hours Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. What are the different ways to create customer oriented culture in an industry?

2. Write down the categories of quality cost.

3. Write the requirements of reliable supplier rating.

4. How employee involvement can be improved in an organization?

5. What are the different ways of bench marking?

6. How cause and effect diagram used in TQM?

7. Write the specific use of np-chart.

8. Define process capability index?

9. Name any two generic ISO standards. Why it is called generic standards?

10. What are the core elements of QMS?

PART B — (5 × 16 = 80 marks)

11. (a) (i) Write down the underlying principles of TQM. (8)

(ii) Describe the various dimensions of quality. (8)

Or

(b) (i) Explain the role of senior level management in TQM implementation. (10)

(ii) Illustrate the various steps involved in customer satisfaction process. (6)

12. (a) (i) Give a detailed note on PDCA cycle. (8)

(ii) Portray the characteristics of empowered employees. (8)

Or

(b) (i) What is supplier partnering? Indicate its important benefits. (8)

(ii) Explain the step by step procedure in strategic quality planning. (8)

13. (a) (i) List out the seven new management tools. Explain them briefly. (8)

(ii) Discuss about the various stages in failure mode and effect analysis. (8)

Or

(b) (i) Compare six sigma and TQM concepts. (10)

(ii) What benefits have been achieved by the organizations that have successfully completed their benchmarking programs? Name any four selected best practiced companies. (6)

14. (a) (i) Describe a basic structure of house of quality, a primary planning tool used in quality function deployment (QFD). (6)

(ii) Explain the differences between x-bar and R-charts. How can they be used together and why would it be important to use them together? (10)

Or

(b) (i) Describe a quality control chart and how it can be used. What are the upper and lower control limits? What does it mean if an observation falls outside the control limits? (10)

(ii) Illustrate the key characteristics of six sigma. (6)

15. (a) Explain about the various processes used in ISO 9001 quality management system.

Or

(b) With the help flow chart explain the various divisions of ISO 14000 standard.

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