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P.E.S. College of Engineering, Mandya - 571 401

(An Autonomous Institution affiliated to VTU, Belagavi)

Eighth Semester, B.E. - Industrial and Production Engineering

Semester End Examination; May/June - 2018

Total Quality Management

Time: 3 hrs

Max. Marks: 100

Note: i) Answer **FIVE** full questions, selecting **ONE** full question from each unit.

ii) Draw neat diagram, whenever necessary.

UNIT - I

- 1 a. List the contributions of the following quality gurus in the evolution of quality : 10
- i) Edward Deming ii) William Crosby iii) Joseph Juran
- b. Illustrate the evolution of quality methods with neat sketch in total quality management. 10
- 2 a. "The four fitness's in companies, will bring in the vertical and horizontal integration is due to successive TQM Innovations". Validate the statement with help of sketches. 10
- b. Briefly discuss the quality of conformance versus quality of design. 10

UNIT - II

- 3 a. "Although each company will find its own way to implement TQM, four areas of concepts and practices i.e. revolutions are common to most successful companies in implementation of TQM"
- i) What are those four areas of concepts and practices successful companies in implementation of TQM? 10
- ii) Justify these four areas of concepts and practices successful companies in implementation of TQM.
- b. Explain market-in and product out concept with the help of neat sketch. 10
- 4 a. Problem solving is challenging job for almost all world class manufacturing industries :
- i) Which type of model do you suggest for problem solving process? 10
- ii) Discuss the same with neat sketch
- b. "Process verses Creativity" an important consideration to be made between Western and Japanese TQM approach. Enumerate the above statement. 10

UNIT - III

- 5 a. Identification of the problem is the most important aspect of reactive problem solving. How the process of identifying the problem may be divided and enumerate the process of identifying the problem? 10
- b. TQM has focused on the most effective and most frequently used tools based on the experience or real problem solving in real companies. Identify and discuss the 7QC steps and 7QC tools used for standardized reactive improvement. 10

- 6 a. What is proactive improvement? List and Explain the KJ method that is adopted in the field of proactive quality improvement in TQM. 10
- b. With neat sketch, illustrate the seven management and planning tool for proactive improvement to understand complex situation and make appropriate plans. 10

UNIT - IV

- 7 a. Briefly discuss the seven management and planning tools in relation to PDCA, the 7 steps and 7QC tools for proactive improvement. 10
- b. Identify and discuss the seven principles for activating team work of quality circles in Japanese industries. 10
- 8 a. What is goal setting? Identify and discuss the types of goals and compare Japanese and U.S. approaches for goal setting. 10
- b. List and identify the seven benefits of the Japanese presentation system. 10

UNIT - V

- 9 a. What is Hoshin management? Identify and discuss the elements of Hoshin planning. 10
- b. Identify and discuss the phases of Hoshin planning. 10
- 10 a. Briefly compare the difference between Management By Objective (MBO) and Hoshin management. 10
- b. “Hoshin management as system engineering for alignment”. Justify the statement by comparing with process engineering. 10

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