B.Tech.

(SEM. VII) ODD SEMESTER THEORY EXAMINATION 2013-14

QUALITY MANAGEMENT

Time : 3 Hours

Total Marks : 100

Note :- Attempt all questions. Marks allotted are indicated against every part of each question.

1. Attempt any four parts of the following : *(5×4=20)*
   
   (a) How the concept of quality changes ? Explain in short.
   
   (b) What do you mean by design review ?
   
   (c) Explain evolution of prototype.
   
   (d) Explain the contribution of any two of following in quality improvement : Joseph M. Juran, Philip B. Crosby, W. Edwards Deming's, Armand V. Feigenbaum, Dr. Kaoru Ishikawa, Dr. Genichi Taguchi.
   
   (e) What is EFQM ? Explain in short.
   
   (f) What are the different methods of development of sources ?

2. Attempt any four parts of the following : *(5×4=20)*
   
   (a) Explain organisation structure and its design,
   
   (b) Explain the attitude of top management, operator attitude and responsibility toward quality improvement.
   
   (c) Explain how the cost of quality should be optimum with sketch of different costs.
(d) What do you mean by quality costs? Explain different components of it.

(e) What should be the operator attitude for improvement in quality?

(f) What do you mean by quality of conformance and quality costs?

3. Attempt any two parts of the following: \(10 \times 2 = 20\)

(a) What do you mean by control chart for variable and attributes? Explain in detail about \(\bar{X}\) charts and its construction and analysis.

(b) What is process capability? Explain in detail, the improvement in quality with the help of control charts.

(c) Write short notes on:
   (i) Defect and defectives
   (ii) Weighted defect control charts.

4. Attempt any two parts of the following: \(10 \times 2 = 20\)

(a) What is MTTF? Explain in detail the methods of identification and analysis of defect and also its corrective measure.

(b) What is reliability? What are the different factors which affect reliability? Explain the methods of calculation of reliability with an example.

(c) Write short notes on:
   (i) Building reliability in a product
   (ii) Design of reliability.
5. Attempt any four parts of the following: \((5 \times 4 = 20)\)

(a) What do you mean by Taguchi methods?
(b) Explain a cause-and-effect (Ishikawa) diagram to identify a process defect.
(c) Explain the concept of ISO 9001 and its implementation.
(d) Explain quality circle in brief.
(e) Discuss JIT in manufacturing organisation.
(f) Explain life cycle curve of a product/component.