GUJARATTECHNOLOGICAL UNIVERSITY

ME –2ND SEMESTER EXAMINATION-SUMMER 2015

Subject code: 2724705 Date: 01 /06/2015

Subject Name: TotalQuality Management

Time: 2:30 Pm to 5: 00 Pm Total Marks: 70

Instructions:

- 1. Attempt all questions.
- 2. Make suitable assumptions wherever necessary.
- 3. Figures to the right indicate full marks.
- Q.1 (a) Explain Quality chain as key element of TQM with an industrial 07 example.
 - (b) What is benchmarking? What is the significance of carrying out 07 benchmarking?
- Q.2 (a) What is the importance of fishbone diagram? Draw a fishbone diagram 07 for poor performance of centralized air conditioned plant in the administrative block of a company.
 - (b) Evaluate the following statements.
 - 1. 'Formation of quality circle will improve the working environment, quality of work and satisfaction level of the employees.'
 - 2. 'Changing the culture of the organization is the need for implementing TQM.'

OR

- (b) Explain the contribution of Deming in the field of quality management 07 with the help of 14 points given by him.
- Q.3 (a) What is prevention cost and internal failure cost? Give three examples 07 of both the costs.
 - (b) Explain quality of design and quality of conformance. Also state the 07 factors on which they are dependent.

OR

- Q.3 (a) What is appraisal cost and external failure cost? Give three examples of 07 both the costs.
 - (b) In which circumstances 100% inspection is not possible? What should 07 be the approach of the company in such cases?
- Q.4 (a) Tapered roller bearings of the same size are made in lots of 500 each. 07 Following are the results of number of defects in first 9 lots. Draw an appropriate chart and comment on the stability of the process. Also compute control limits for the future production.

Lot No.	1	2	3	4	5	6	7	8	9
No. of defects	42	61	72	44	34	22	31	18	25

(b) Following is the data for defects found in the Electric motors supplied to 07

07

customers in the past one year. Draw a pareto diagram and give your comments.

Type of defect	Frequency		
Vibration	74		
Broken foundation	9		
Bearing noise	8		
Missing lifting lug	9		
Drawing overcurrent	43		
Wrong supply	5		
Broken body	8		
Missing cooling fan	7		
Misalignment in Foundation holes	3		
Missing manual	51		

OR

Q.4 (a) Justify:

07

- 1. Quality assurance is superior to Quality control.
- 2. Top management commitment is extremely important for any quality management initiative.
- (b) What are the applications of control charts? What inferences can be derived from the control charts? Discuss a few patterns of the same which can give some indications to the management.
- Q.5 (a) Explain the compliance and surveillance audits in the context of 07 ISO9001 certification.
 - (b) What are the benefits of ISO9001 certification? Do you think the cost 07 incurred for the certification is justified?

OR

- Q.5 (a) Explain the adequacy and internal quality audits in the context of 07 ISO9001 certification
 - (b) Explain the following ISO clauses:

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- 1. Design control
- 2.Purchasing
