eat No.:	Enrolment

Subject Name: Quality and Reliability Engineering

Se

Subject code: 171906

Time:02.30pm-05.00pm

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER-VII • EXAMINATION - SUMMER • 2015

Date: 06/05/2015

Total Marks: 70

Instr	ucti	ons:	
	2.	Attempt all questions. Make suitable assumptions wherever necessary. Figures to the right indicate full marks.	
Q.1	(a) (b)	implementation of TQM in an organization?	
		ii) Define Quality Control. What are the objectives of quality control?	03
Q.2	(a) (b)	•	07 07
	(b)		07
Q.3	(a)	example. 1) Affinity Diagram	07
	(b)	2) Process Decision Program Chart What is Business Process Reengineering? Explain the principles, methodology and limitation of Business Process Reengineering. OR	07
Q.3	(a) (b)	circumstances would each type be most appropriate? What are the advantages of using benchmarking as an improvement tool?	07
	(0)	Sigma to an organization.	U7
Q.4	(a)	Explain the steps for implementation of a Quality Management System and also state the benefits of implementing it.	07
	(b)	• • •	07
Q.4	(a)		07
	(b)		07
Q.5	(a)	i) State only the usefulness of following quality control tool:	04
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Pareto diagram, Cause and effect diagram, Histogram and Check sheet.

ii) Draw and explain the Bathtub curve.

- 03
- (b) A controlled manufacturing process is 0.3% defective. What is the **07** probability of taking 2 or more defectives from a lot of 100 pieces?

 1)By using Poisson approximation.
 - 2) By using Binomial distribution

OR

- Q.5 (a) i) A lot of 25 articles contain 3 defective. A sample of 5 is selected at random from the lot for inspection. What are the respective probabilities of 0, 1,2 & 3 defectives occurring in sample of 5?
 - ii) State the three fundamental laws of probability.

- 03
- (b) Differentiate between Continuous probability distribution and discrete 03 probability distribution giving their examples.
- (c) For the logic diagram shown in figure, construct the fault tree. 04


