

GUJARAT TECHNOLOGICAL UNIVERSITY

B. E. SEMESTER: VII

FOOD PROCESSING TECHNOLOGY

Subject Name: **Food Standards and Quality Assurance**

Subject Code: **171402**

Teaching Scheme				Evaluation Scheme			
Theory	Tutorial	Practical	Total	University Exam (E)		Mid Sem Exam (Theory) (M)	Practical (Internal)
				Theory	Practical		
4	0	2	6	70	30	30	20

Sr. No	Course Content	Total Hrs.
1.	Introduction: Definition of Quality, Quality in Food Products. Laboratory Requirements: Layout and requirements of quality control laboratory.	03
2.	Statutory & Voluntary Food Standards: FPO, PFA, AGMARK, APHA, FDA, BIS, Introduction to FSSA 2006. Quality Control, Quality Assurance, Quality Policy, Quality Analysis.	05
3.	Total Quality Management (TQM): Principles of TQM, TQM Transition Model, Integrated TQM Model, Customer Satisfaction, Continuous Improvement Programme, Six Sigma Technique, Kaizen, 5's Concept, Strategic Grid, Customer Window. Quality Management Systems and Auditing: ISO 9000, 22000, 14000, HACCP, SQF.	09
4.	Food Plant Hygiene and Sanitation: Good Manufacturing Practices (GMP), Personal Hygiene and Sanitation required in Food Industry, Control measures to prevent rodent and insect infestation.	07
5.	Sampling and Estimation for Quality Evaluation: Sensory evaluation and its need. Criteria for selection of taste panel members, Determination of threshold level. Outline of taste panel methods: Difference tests and Rating tests. Unbiasedness, Consistency, Efficiency, Sufficiency and Completeness of a Statistic. UMVUE, Method of moments and Method of maximum likelihood, Interval estimation procedure.	14

6.	Statistical Quality Control: Probability Theory, Conditional probability and independence, Frequency distribution, Measures of dispersion, Standard Deviation, Normal, Binomial, Poisson & X^2 -Distributions, Testing of Hypothesis, Neyman-Pearson Lemma, Degrees of freedom, Null Hypothesis, t-test, Chi-Square test, Linear model Analysis of Variance (ANOVA), Simple Regression, Correlation coefficients.	14
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Reference Books:

1. Quality Control for Food Industry. Vol I and II by A. Krammer. AVI Publications.
2. Food Quality Assurance by W.A. Gould. AVI Publications.
3. Handbook of Analysis and Quality Control of fruits & Vegetables Products by Dr. S. Ramgama. Tata Mc Grow Hill Publications.
4. Fundamentals of Statistics by S.C. Gupta. Himalaya Publishing House.
5. Probability and Statistics for Engineers. Miller and Freund's. Prentice Hall of India