

**SARDAR PATEL UNIVERSITY**  
**Programme: M.COM. (CBCS)**  
**Semester: IV**  
**Syllabus with effective from: JUNE-2016**

<b>Course CODE:PBO4ECOM 08</b>	<b>Total Credits :5</b>
<b>Course Title :Quantitative Techniques in Management</b>	
<b>Objective: To provide conceptual knowledge of Research Methodology which will useful in Research in any area.</b>	

<b>Unit</b>	<b>Description in detail</b>	<b>Weightage (%)</b>
<b>1</b>	<b>PROJECT MANAGEMENT: ( PERT AND CPM)</b> <b>Introduction, Meaning of PERT, Rules of constructing a Network, Network components, Estimate of time of activities, Characteristics, Advantages &amp; Limitations of PERT. Critical Path Method (CPM), Time calculations in network, Determination of Floats: Total Float, Free Float and Independent Float, Difference between PERT and CPM.</b>	<b>25(%)</b>
<b>2</b>	<b>INVENTORY CONTROL:</b> <b>The meaning of Inventory Control, Types of Inventory: Movement Inventories, Buffer Inventories, Anticipation Inventories, Decoupling Inventories, Cycle Inventories. Costs associated with Inventory, Concept of EOQ, Deterministic Inventory models without shortages: Economic Order Quantity Model with Constant Demand, Inventory Models under Price breaks and Quantity discount, Simple Applications, ABC and VED analysis of Inventory.</b>	<b>25(%)</b>

3	<p><b>DECISION THEORY AND DECISION TREES:</b>  <b>Introduction, Elements of Decision theory, Steps of Decision-Making Process ,Types of Decision-Making Environments, Decision –Making under Uncertainty:</b>  <b>(1) Optimistic (Maximax or Minimax) criterion</b>  <b>(2) Pessimism( Maximin or Minimax) criterion</b>  <b>(3)Coefficient of optimism (Hurwitz)criterion</b>  <b>(4) Laplace criterion.</b>  <b>Decision-Making under Risk: Expected Monetary Value (EMV), Expected value of Perfect Information (E.V.P.I).</b>  <b>Simple Applications based on various criteria.</b>  <b>Concept of Decision Trees and its importance in decision making Problem.</b></p>	25(%)
4	<p><b>TOTAL QUALITY MANAGEMENT:</b>  <b>Quality and its Role in Business. Reasons for Change in Quality Management System, Principles of Total Quality Management (TQM), Organizational Changes for Adopting TQM System, Unique Features of TQM System, Tools &amp; Techniques for TQM, Set up for Total Quality System in an Organization, Application &amp; Benefits of TQM, Difference between ‘Quality’ Management and ‘Total Quality’ Management. Deming’s Fourteen Points of Quality Management. Ten Steps of Quality Improvement of Juran.</b></p>	25(%)

**REFERENCES:**

- (1) J.K. Sharma J.K.: Quantitative Techniques for Managerial Decisions.**
- (2) P.C. TULSIAN; VISHAL PANDEY: Quantitative Techniques theory and Problem.**
- (3) S.K.MANDAL: “Total Quality Management Principles and Practice”**

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