

**B.COM – SECOND YEAR  
SEMESTER- III  
OPERATIONS RESEARCH  
SUBSIDIARY ELECTIVE-1**

**Course Content:**

<b>Module No.</b>	<b>Topics / Chapters Name</b>	<b>% Weightage</b>
I	<p><b>Linear Programming Problem(LPP)</b></p> <ul style="list-style-type: none"> <li>• Definition and scope of LPP</li> <li>• Important terminologies of LPP</li> <li>• Mathematical formulation of LPP and different methods of solving these problems</li> <li>• Advantages , limitations, assumption and uses of LPP</li> <li>• Different methods of LPP simplex and graphical method.</li> <li>• Examples illustrating the use of linear programming problems in day to day life</li> </ul>	25
II	<p><b>Transportation Problem</b></p> <ul style="list-style-type: none"> <li>• Introduction of the problem</li> <li>• General mathematical formulation of this problem</li> <li>• Methods used for solving transportation problems <ul style="list-style-type: none"> <li>➤ North west corner method</li> <li>➤ Matrix minima method</li> <li>➤ Vogel’s approximation method</li> </ul> </li> <li>• Advantages and limitations of each of these methods</li> <li>• Introduction of optimization techniques used in transportation</li> </ul>	25
III	<p><b>Assignment &amp; Replacement Problems</b></p> <p><b>Assignment Problem</b></p> <ul style="list-style-type: none"> <li>• Definition of assignment problem and its mathematical form its significance in day to day life</li> <li>• Hungarian Method for solving assignment problem</li> <li>• Examples based on this concept</li> </ul> <p><b>Replacement Problem</b></p> <ul style="list-style-type: none"> <li>• Definition of replacement problem</li> <li>• Method of solving this problem</li> <li>• Examples based on this concept</li> </ul>	25
IV	<p><b>PERT &amp; CPM</b></p> <ul style="list-style-type: none"> <li>• Introduction of PERT and CPM</li> <li>• Importance of these techniques in management</li> </ul>	25

	<ul style="list-style-type: none"><li>• Concept of PERT network</li><li>• Estimates of time of activities</li><li>• Characteristics of PERT</li><li>• Advantages and limitations of PERT and CPM</li><li>• Time calculation in Network</li><li>• Difference between PERT and CPM</li><li>• Practical examples based on these techniques</li></ul>	
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