

CM651: Value Engineering

Teaching Scheme			Credits	Marks Distribution				Total Marks
L	T	P		Theory Marks		Practical Marks		
				ESE	CE	ESE	CE	
3	2	0	5	70	30	30	20	150

Course Content:

Sr. No.	Topics	Teaching Hrs.
1	<p><u>Introduction:</u></p> <p>Concept and definition, objectives of Value engineering, Advantages of Value methodology, Scenario of value engineering with context to India, Origin of Value engineering.</p> <p>Quantity surveying and value engineering, team of value engineering and its quality, Applicability to Mega projects, Value engineering and project management.</p>	06
2	<p><u>Value Analysis:</u></p> <p>Concept, Job planning and its importance in value engineering, Various phases of Value Engineering -Information Phase, Function Analysis Phase, Creative Phase, Evaluation Phase , Development Phase.</p>	09
3	<p><u>Functional Analysis:</u></p> <p>Functions at various levels and of various types, cost and worth of function, importance of functional analysis, FAST Diagramming - How to prepare.</p>	09
4	<p><u>Creative Phase:</u></p> <p>Creative thinking and creative processes, Application in Value engineering, Various techniques, fundamental approaches of similarity, contiguity and contrast, Positive approach.</p>	09

5	<u>Cost Model:</u>	06
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Introduction, Value, Cost and Worth, True and Poor value, Factors affecting the value , Value Index, Cost and Value Gap, importance of cost model in Value Engineering , Function and Matrix Cost model, Life cycle cost analysis.

6	Environmental Impact Assessment with VE approach for the projects.	03
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Total Hrs.	42
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Reference Books:

1. Larry W. Zimmerman, “*Value Engineering: A Practical Approach for Owners*”, Designers & Contractors - CBS Publication.
2. Arthur E. Mudge, “*Value Engineering: A Systematic Approach*”, Mc GrawHill.
3. Donald E. Parker, “*Value Engineering : Theory*”, Soundaram Publishers
4. O' Brien J.J., “*Value Analysis in Design and Construction*”, Mc Graw Hill.
5. “*Value Methodology*” A Pocket Guide to Reduce Cost and Improve Value Through Function Analysis; Lawrence D Miles Foundation.
6. Lomansh, S., “*Value Management: A Textbook*”, 1997 - Sterling Publishers (Pvt.) Ltd., New Delhi.