E-Resource Support for Teaching Learning

Theme:Sensitivity Analysis of Linear Programming Problem

Relevant Discipline: Operations Research

Topic: Sensitivity Analysis of Linear Programming Problem

Topic	Resources	Annotation
Sensitivity Analysis	**1.*(Videos)*** a.https://youtu.be/wxpMKReH8lc Continuation- https://youtu.be/_-Mlp3w1Brc	a. ***Description:*** *The NPTEL video provides learners a basic introduction to Sensitivity analysis with the help of suitable exampesfor the six situations of Sensitivity analysis* ***Video Duration:*** *Link 1: 22mins36secs (39th min onwards)* *Link 2: 48mins(till 48th min)* ***Suitable for:*** *Undergraduate students of Engineering and post graduate students of Science/Management/Commerce* ***Learning outcome:*** *Provide students a basic understanding of Sensitivity analysis along with the impact of six variations of changes*
	b.https://youtu.be/3vNBvoocR0s Continuation- https://youtu.be/MM2QWdoxOno	b. ***Description:*** *The NPTEL video provides learners an introduction to Sensitivity analysis and provides the derivations for the two cases- namely the objective function coefficient change and Right Hand Side of constraint change* ***Video Duration:*** *Link 1: 50mins01secs* *Link 2: 37mins56secs* ***Suitable for:*** *Undergraduate students of Engineering and post graduate students of Science/Management/Commerce* ***Learning outcome:*** *Provide students a basic understanding of Sensitivity analysis along with the variations of changes*
	c.https://www.youtube.com/watch?v=N924D6tGOG8&t=168s	c. ***Description:*** *Thevideo provides astep by step approach to carry out sensitivity analysis using Excel Solver* ***Video Duration:****4mins22 secs* ***Suitable for:****Undergraduate students of Engineering and post graduate students of Science/Management/Commerce* ***Learning outcome:*** *Enable students to carry out basic sensitivity analysis using Excel Solver*
	2.*(Website)* a.https://sites.math.washington.edu/~burke/crs/407/notes/section6.pdf	a. ***Description:*** *The website provides a detailed description of Sensitivity Analysis with the mathematical derivations* ***Suitable for:****Post graduate students of Science/Management/Commerce* ***Learning outcome:*** *Enable students to carry out derivations related to sensitivity analysis*

Sensitivity Analysis	b. https://personal.utdallas.edu/~scniu/OPRE-6201/documents/LP12-Sensitivity-Analysis.pdf c.https://www.investopedia.com/ask/answers/052115/what-are-some-examples-ways-sensitivity-analysis-can-be-used.asp	***b. Description:*** *The website provides numericals associated with the applications of sensitivity analysis* ***Suitable for:*** *Undergraduate students of Engineering and post graduate students of Science/Management/Commerce* ***Learning outcome:*** *Enable students to apply the theory of sensitivity analysis for solving numericals* ***c. Description:*** *The short writeup in the website provides the practical applications of sensitivity analysis* ***Suitable for:*** *Undergraduate students of Engineering and post graduate students of Science/Management/Commerce* ***Learning outcome:*** *Enable students to understand the possible application areas of sensitivity analysis*
	3.(E Book) a.https://thalis.math.upatras.gr/~tsantas/DownLoadFiles/Taha%20-%20Operation%20Research%208Ed.pdf b.https://thalis.math.upatras.gr/~tsantas/DownLoadFiles/Taha%20-%20Operation%20Research%208Ed.pdf	***a.Description:****In Chapter number 3 of the E-book, a detailed description of sensitivity analysis has been provided along with solved and unsolved numericals of varied difficult levels* ***Page nos:****123-149* ***Suitable for:*** *Undergraduate students of Engineering and post graduate students of Science/Management/Commerce* ***Learning outcome:****Enable students a basic understanding of Sensitivity analysis along with numericals* ***b.Description:****The e-book provides a brief yet concise overview of sensitivity analysis and its two major variations along with numericals* ***Page nos:****117-122* ***Suitable for:*** *Undergraduate students of Engineering* ***Learning outcome:****Provide students a basic understanding of Sensitivity analysis along with numericals*
	4.(E-Journal) a.https://www.sciencedirect.com/science/article/pii/S0377221796001725 b.https://www.sciencedirect.com/science/article/pii/S0925527310001702	***a.Description:****The research paper explores the problems that may occur upon using standard softwares for sensitivity analysis* ***Suitable for:****Post graduate students of Science/Management/Commerce* ***Learning outcome:****Provide students idea about the various problems that they might encounter while performing sensitivity analysis and how the same can be overcome* ***b.Description:****The research paper provides a practical approach to sensitivity analysis under degeneracy* ***Suitable for:*** *Post graduate students of Science/Management/Commerce* ***Learning outcome:*** *Provide students*

	c.http://archives.math.utk.edu/ICTCM/VOL07/C034/paper.pdf	*with a practical perspective of how sensitivity analysis can be carried out under conditions of degeneracy* ***c.Description:****The research paper describes the steps required to program a handheld scientific calculator for sensitivity analysis* ***Suitable for:****Undergraduate students of Engineering* ***Learning outcome:*** *Provide students insight into programming handheld devices for performing sensitivity analysis*

Recommended By:

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