19CE4601B - ROCK MECHANICS

Course Category:]	Program Elective							Credits:			3	
Course Type:			,	Theory						Le	Lecture-Tutorial-			3-0-0	
J I											Practical: Continuous				
Prerequisites:											Evaluation: Semester End Evaluation:			30	
				19CE3405 - Geotechnical Engineering					5						
*										/0					
				Total Marks: 1							00				
Course			1	6.4		.1 .	1		1 /						
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CO1 CO2						nd over			nues					K2 K2	
CO2 CO3						nd stabi								K2	
CO4						nd found								K2	
CO5						merical								K2	
		Contri	bution	of Cou	irse Ot	itcome	s towar	rds ach	ieveme	ent of Pr	ogram O	utcome	s		
	PO1	PO2	PO3	PO4	2	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	
CO1		2	2										3	2	
CO2		2		2									3	2	
CO3		2	2										3	2	
CO4		2		2									3	2	
CO5		2		2									3	2	
		1- Lo)W				2-Me					3-High			
						Cou	rse (Cont	tent						
		assific		or m		ock an	d Roc	ek ma	sses, S	Strength	and m	odulus	from		
UNIT-	1 Pl m		ations. mecha cal pro	anical opertie	prope	erties,	Labor	atory	tests	for va	and m rious p n rock n	ohysical	and	CO1	
UNIT- UNIT-	1 Pł m str 2 Fl U: St	nysio echanio ress in situ str at jack ndergro ress co	ations. mecha cal pro the gro ress, v techni ound o oncentr	anical operties ound. arious ique, C openin ration f	prope s. Field metho Overco g in i for diff	erties, d shear ods of ring tea infinite ferent s	Labor r test, stress chniqu medi shapes	ratory Deforr measu e. um, E of ope	tests nabilit rement Clastic ening, Z	for vay y tests i , Hydro and ela Zone of :	rious p n rock n fracturin sto-plass	physical nass, Stand ng techr tic appr e.	and ate of nique, roach.		
	$\begin{array}{c} 1 & Ph \\ m \\ str \\ 2 & In \\ 7$	nysio echani- ress in situ str at jack ndergro- ress co- nilure rucker- rength	ations. mecha cal pro the gro ress, v techni ound o oncentri criteria -Prager and d hear st	anical opertie ound. arious ique, C openin ration f a for r Criter eforma trength	prope s. Field metho Overco g in i for diff rock rion, H ability	erties, d shear ods of ring tec infinite ferent s and r Ioek-B of join	Labor r test, T stress chniqu medi hapes ock n rown (nted ro	ratory Deforr measu le. um, E of ope nasses, Criteric ck mas	tests nabilit rement Clastic ning, Z Moh on, Ter ss, Fra	for vay tests i , Hydro and ela Zone of f r-Coulo nsile Yie cture str	rious p n rock n fracturin sto-plas	bhysical nass, Stand ng techr tic appr e. Id Crit rion. f jointed	and ate of nique, roach. erion, l rock	CO2	
UNIT-	$\begin{array}{c} 1 & \operatorname{Ph} \\ & m \\ & stu \\ stu \\ 2 & \operatorname{Fl} \\ U^{1} \\ \mathrm{St} \\ 3 & \operatorname{St} \\ 3 & \operatorname{St} \\ & m \\ & jo \\ 3 & \operatorname{St} \\ \mathrm{A} & \operatorname{Fc} \end{array}$	nysio echanic ress in situ str at jack ndergra ress co ilure rucker- rength ass. SI int con ability ilure, To oundati	ations. mecha cal pro- the gro ress, v techni ound o <u>oncentri</u> criteria -Prager and d hear st <u>npliano</u> of roo Fopplin	anical opertie ound. arious ique, C openin ration f a for r Critez eforma trength ce. ck slop ng failu rocks,	prope s. Field metho Overco g in i for diff rock rion, H ability of Ra bes, M ure. , Estim	erties, d shear ods of ring tea infinite ferent s and r loek-B of join ock jo	Labor r test, stress chniqu medi hapes ock n rown (nted roo ints, D f failu of beau	ratory Deforr measu e. um, E of ope nasses, Criterio ck ma: Deform re, Pla ring ca	tests nabilit rement clastic ning, Z Moh on, Ter ss, Frad ability	for vay tests i , Hydro and ela <u>Zone of</u> r-Coulo nsile Yie cture str of Roo	rious p n rock n ofracturin sto-plast influence mb Yie eld Crites ength of	ohysical nass, Stand ng techr tic appr e. Id Crit rion. f jointed s, Conce	and ate of nique, roach. erion, l rock ept of rcular	CO2 CO3	
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UNIT- UNIT- UNIT-	1 Ph m str .1 In .2 Fl .3 St .3 St .4 Fc .5 A	nysio echani ress in situ str at jack ndergre ress co ilure rucker- rength ass. Sl <u>int con</u> ability ilure, T pundati ettleme tethods nchors	ations. mecha cal pro- the gro ress, v techni- ound of ncentri criteria -Prager and d hear st npliand of roo Topplin ion on ent in r	anical opertie ound. arious ique, C openin ration f a for r Criter eformat rength ce. ck slop ng failu rocks, ocks, F prove	prope s. Field metho Overco g in i for diff rock rion, H ability of Ra bes, M ure. , Estim Pile fou rock n	erties, d shear ods of ring tec infinite ferent s and r loek-B of join ock jo odes o nation nass re-	Labor r test, stress chniqu medi hapes ock n rown (nted roo ints, E f failu of beam on in roo sponse	ratory Deforr measu e. um, E of ope nasses, Criterio ck ma: Deform re, Pla ring ca bcks. s, Gro nasses	tests mability rement clastic ming, 2 Moh on, Ter ss, Fra ability ane fai apacity uting i	for va y tests i , Hydro and ela Zone of r-Coulo asile Yie cture str of Roc lure, Wo , Stress n Rocks cation t	ofracturin sto-plass influence mb Yie ength of ek joints edge fail distribu	ohysical nass, Stand ng techr tic appr e. Id Crit rion. f jointed a, Conce lure, Cin tion in n bolting,	and ate of nique, roach. erion, l rock ept of rcular rocks, Rock	CO2 CO3 CO4	
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	2. Rock mechanics and the design of structures in rock, L. Obert and Wilbur I.
	Duvall, John Wiley & Sons, Inc
e-Resources& other digital material	 <u>https://nptel.ac.in/courses/105106055/</u> <u>http://jntuk-coeerd.in/</u>