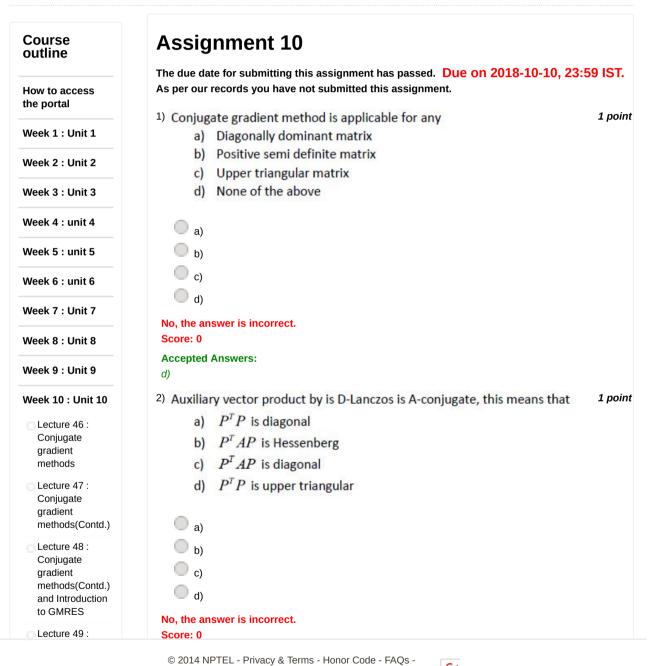
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Unit 11 - Week 10 : Unit 10



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Lecture	Which one is not true for a conjugate gradient method
	a) $P^T P$ is symmetric
Quiz : Assignment 10	b) P^TAP is symmetric
Feedback for Week 10	c) P^TAP is not symmetric d) None of the above
Week 11	(a)
Week 12	(b)
Download Videos	(C)
Assignment	(d)
Solution	No, the answer is incorrect. Score: 0
Interactive Session with	Accepted Answers:
Students	c) 4) 1 point
	The residuals at successive iteration levels r_j and r_{j+1} in a conjugate gradient method
	a) Orthogonal
	b) Dependent
	c) A-orthogonal
	d) Orthonormal
	(a)
	(b)
	(C)
	(d)
	No, the answer is incorrect. Score: 0
	Accepted Answers: a)
	5) Convergence of C-G depends directly on 1 point
	a) Condition number of the eigenvector matrix of A
	b) Condition number of A
	 c) Square root of condition number of A d) Square root of spectral condition number of A
	., ., ., ., ., ., ., ., ., ., ., ., ., .
	(a)
	(b)
	(C)
	(a)
	No, the answer is incorrect. Score: 0
	Accepted Answers:
	d)
	6) 1 point

Conjugate gradient method uses recursive relation for a) Auxiliary vector p b) Residual r c) Solution vector x d) All of the above	
a) b) c) d)	
No, the answer is incorrect. Score: 0	
Accepted Answers: d)	
7) Which one uses oblique projection method a) Conjugate gradient b) D-Lanczos algorithm c) Steepest decent d) GMRES	point
a) b) c) d)	
No, the answer is incorrect. Score: 0	
Accepted Answers: d)	
8) In GMRES, which of the steps is followed a) Recursion of residual vector b) L-U decomposition c) Least square solution d) All of the above a) b) c)	point
(a)	
No, the answer is incorrect. Score: 0	
Accepted Answers: c)	
	point

a) Sk b) A i c) Sy d) No	not applicable for ew symmetric matrix non-singular matrix with one of the diagonal elements zero mmetric matrix one of the above	
(b)		
C)		
,	swer is incorrect. Answers:	
d)		
	the convergence criteria of GMRES Number of steps = number of rows of A	1 point
b)	Residual norm γ_m is small enough	
	Solution vector $x_m - x_{m-1}$ is small enough	
d)	Break of Arnoldi steps	
a) b) c) d)		
ŕ	swer is incorrect. Answers:	
Pre	vious Page	End