X

NPTEL

reviewer3@nptel.iitm.ac.in ▾

Unit 4 - Week 3 : Unit 3

Week 3 : Assignment

The due date for submitting this assignment has passed.
As per our records you have not submitted this assignment. **Due on 2018-09-05, 23:59 IST.**

1) ***0 points***

The percentage of discretization error for solving $\frac{d^2T}{dx^2}=0$ by using finite central difference scheme with $\Delta x=\frac{1}{100}$ is

- a) 1%
- b) 0.01%
- c) Can't be estimated
- d) No error

No, the answer is incorrect.
Score: 0

Accepted Answers:
b) 0.01%

2) Which one is not true for TDMA algorithm ***1 point***

- a) It uses recursive relation
- b) The number of operations are usually less than Gauss elimination
- c) TDMA can be used as line solver in an ADI
- d) TDMA is applicable for symmetric matrices only

No, the answer is incorrect.
Score: 0

Accepted Answers:
d) TDMA is applicable for symmetric matrices only

3) A pentadiagonal matrix cannot be solved by using ***1 point***

Week 8 : Unit 8
Week 9 : Unit 9
Week 10 : Unit 10
Week 11
Week 12
Download Videos
Assignment Solution
Interactive Session with Students

Score: 0

Accepted Answers:

d) TDMA

4) $\frac{d^2T}{dx^2} = c$ has non-unique solution if **1 point**

- a) Both the boundaries have Dirichlet boundary condition
- b) One boundary is Dirichlet and other one is Neumann
- c) One boundary is mixed and other one is Neumann
- d) None of the above

No, the answer is incorrect.

Score: 0

Accepted Answers:

d) None of the above

5) Solution exist for $Ax = b$ where $b \neq 0$ but it has non-unique solution then **1 point**

- a) There are finite sets of value of x
- b) can be zero
- c) can have infinite values
- d) appears in complex conjugate

No, the answer is incorrect.

Score: 0

Accepted Answers:

c) can have infinite values

6) **1 point**

$Ax = 0$ has infinite solutions with x_1, x_2 as two such solutions then which one is not another solution of $Ax = 0$? (c_1 and c_2 are arbitrary constants)

- a) $c_1 x_1$
- b) $x_1 + x_2$
- c) $x_1 + c_1$
- d) $c_1 x_1 - c_1 x_2$

No, the answer is incorrect.

Score: 0

Accepted Answers:

c) $x_1 + c_1$

7) **1 point**

The vectors $\begin{Bmatrix} 1 \\ 2 \\ 3 \end{Bmatrix}$ and $\begin{Bmatrix} 4 \\ 5 \\ 6 \end{Bmatrix}$ belongs to

- $a) R^1$
- $b) R^2$

$c) R^3$

$d) R^\infty$

No, the answer is incorrect.
Score: 0

Accepted Answers:
$c) R^3$

8) The function f(x)=sin x belongs to ***1 point***

$a) R^1$

$b) R^0$

$c) R^\infty$

$d)$ Not a vector space

No, the answer is incorrect.
Score: 0

Accepted Answers:
$c) R^\infty$

9) Ax=b has no solution if ***1 point***

a) lies in null space of A

b) lies in row space of A

c) lies in column space of A

d) does not lie in column space of A

No, the answer is incorrect.
Score: 0

Accepted Answers:
d) does not lie in column space of A

10)If det(A)=0 then ***1 point***

a) $N(A) = 0$

b) $N(A) \neq 0$

c) $N(A) \epsilon C(A^T)$

d) $N(A) \epsilon C(A^T)$

No, the answer is incorrect.
Score: 0

Accepted Answers:
b) $N(A) \neq 0$

Previous Page End