

### QUESTION 1

If vector  $\mathbf{w}$  is of dimension  $3 \times 1$  and matrix  $\mathbf{A}$  of dimension  $5 \times 3$ , then what is the dimension of  $(\mathbf{w}^\top \mathbf{A}^\top \mathbf{A} \mathbf{w})^\top$ ?

- $5 \times 5$
- $3 \times 3$
- $3 \times 1$
- $1 \times 1$

5 points

Save Answer

### QUESTION 2

Is this the image of a tree?



- yes
- false

5 points

Save Answer



**QUESTION 1****[ 5.0 marks ]** *Multiple Choice*

If vector  $w$  is of dimension  $3 \times 1$  and matrix  $A$  of dimension  $5 \times 3$ , then what is the dimension of  $(w^T A^T A w)^T$ ?

- a.  $5 \times 5$
- b.  $3 \times 3$
- c.  $3 \times 1$
- d.  $1 \times 1$

**QUESTION 2****[ 5.0 marks ]** *Multiple Choice*

Is this the image of a tree?



- a. yes
- b. false

Exam Number: \_\_\_\_\_  
Seat Number : \_\_\_\_\_

Mark your exam number below

0  1  2  3  4  5  6  7  8  9  
 0  1  2  3  4  5  6  7  8  9  
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 0  1  2  3  4  5  6  7  8  9  
 0  1  2  3  4  5  6  7  8  9

All your MCQ answers must be filled in on this answer page.

For **True** or **False** questions, mark  T or  F. For questions with multiple choices, mark all solutions that are correct (for instance  A  B  C  D).

Q.1  A  B  C  D

Q.2  A  B

Q.1. If vector  $\mathbf{w}$  is of dimension  $3 \times 1$  and matrix  $\mathbf{A}$  of dimension  $5 \times 3$ , then what is the dimension of  $(\mathbf{w}^T \mathbf{A}^T \mathbf{A} \mathbf{w})^T$ ?

- A  $5 \times 5$
- B  $3 \times 3$
- C  $3 \times 1$
- D  $1 \times 1$

[5.0 marks]

Q.2. Is this the image of a tree?



- A yes
- B false

[5.0 marks]