**Multiple-Choice Test**

**Chapter 4.10**

###### Eigenvalues and Eigenvectors

1. The eigenvalues of



are

1. 
2. 
3. 
4. 
5. If is an eigenvector of , the eigenvalue corresponding to the eigenvector is
6. 1
7. 4
8. -4.5
9. 6
10. The eigenvalues of the following matrix



are given by solving the cubic equation

1. 
2. 
3. 
4. 
5. The eigenvalues of a  matrix  are given as , and 7. The  then is
6. 546
7. 19
8. 25
9. cannot be determined
10. If one of the eigenvalues of  is zero, it implies
11. The solution to  system of equations is unique
12. The determinant of  is zero
13. The solution to  system of equations is trivial
14. The determinant of  is nonzero

6. Given that matrix has an eigenvalue value of 4 with the corresponding

eigenvectors of , then  is

1. 
2. 
3. 
4. 