|  |  |
| --- | --- |
| **Q. 1** | C:\Users\Administrator\Downloads\Q7SVT.JPG |
| **Q. 2** | Determine whether the given sets of vectors are linearly dependent or independent?  , ,,,. |
| **Q. 3** |  |
| **Q. 4** |  |
| **Q. 5** | S={(0,0,1,1),(0,0,0,1),(0,1,1,1),(1,1,1,1)} check whether that S is linearly dependent or independent? |
| **Q. 6** | Let vectors **u**=() ,**v**=() and **w**=()  € **R3** find all real values of for which u,v,w are linearly dependent ? |
|  | C:\Users\Administrator\Downloads\Q6SVT.JPG |
| **Q. 7** | For which values of *t* is each set linearly independent?  1) S ={(t,0,0),( 0,1,0), (0,0,1)} 2) S ={(t, t, t) , (t, 1, 0) , (t, 0, 1)} |
| **Q. 8** | Determine whether columns of matrix A are linearly independent A= |
| **Q. 9** | Consider the polynomials 1= and 2= . Are {P1 ,P2} they linearly independent in P3 ? Why or why not? |
| **Q.10** | Find the matrix  such that the given set is  i)  ii) |
| **Q. 11** |  |
| **Q. 12** |  |
| **Q. 13** |  |
| **Q. 14** | C:\Users\Administrator\Downloads\Q9SVT.JPG |
| **Q. 15** |  |
| **Q.16** |  |
|  |  |
| **Q.17** | Let  . Determine if is in . Could be in ?Determine if is in . Could be in ? |
| **Q.18** |  |
| **Q. 19** | The two matrices  and  are row-equivalent.    i) Find rank of A. ii) Find a basis for a row space of A.  iii) Find a basis for a column space of A. iv) Find a basis for a Null space of A.  v) Is the last column of A is in the span of the first three columns? |
| **Q. 20** | ; ;  ; . |
| **Q. 21** |  |
| **Q. 22** |  |
| **Q.23** | State True or False with justification   1. A set containing zero vector is linearly independent. 2. A basis is a spanning set that is as large as possible 3. A basis is a linearly independent set that is as large as possible. 4. The additive inverse of a vectors is not unique 5. A subspace is also a vector space 6. is a subspace of 7. All polynomials of the form  is a subspace of . 8. If the columns of an  matrix , then the equation  is consistent for each . 9. Suppose a matrix has four pivot columns. Then 10. A single vector by itself is linearly dependent. |