MCQ QUESTION BANK ON MATRICES

Type I Rank and Normal Form

Q.1)Which of the following matrix is in normal form?

A) $\begin{bmatrix} 1 & 2 & 5 \\ 0 & 1 & 9 \\ 0 & 0 & 5 \end{bmatrix}$ B) $\begin{bmatrix} 1 & 4 & 3 & 1 \\ 0 & 0 & 1 & 4 \\ 0 & 1 & 3 & 8 \\ 0 & 0 & 0 & 1 \end{bmatrix}$ C) $\begin{bmatrix} 1 & 0 \\ 0 & 1 \end{bmatrix}$ D) $\begin{bmatrix} 1 & 0 & 0 \\ 1 & 0 & 0 \end{bmatrix}$

Q.2) Echelon form of matrix $\begin{bmatrix} 1 & 1 & 1 & 1 & 1 \\ 5 & 5 & 5 & 5 & 5 \\ 8 & 8 & 8 & 8 & 8 \end{bmatrix}$ is

A) $\begin{bmatrix} 1 & 1 & 1 & 1 & 1 \\ 4 & 4 & 4 & 4 & 4 \\ 7 & 7 & 7 & 7 & 7 \end{bmatrix}$ B) $\begin{bmatrix} 0 & 0 & 0 & 0 & 0 \\ 4 & 4 & 4 & 4 & 4 \\ 7 & 7 & 7 & 7 & 7 \end{bmatrix}$ C) $\begin{bmatrix} 1 & 1 & 1 & 1 & 1 \\ 0 & 0 & 0 & 0 & 0 \\ 0 & 0 & 0 & 0 & 0 \end{bmatrix}$ D) $\begin{bmatrix} 1 & 1 & 1 & 1 & 1 \\ 6 & 6 & 6 & 6 & 6 \\ 9 & 9 & 9 & 9 & 9 \end{bmatrix}$

Q.3) Rank of a matrix is nothing but

A) number of zero rows in that matrix B) number of zero rows in its echelon form of matrix

C) number of non-zero rows in that matrix D) number of non-zero rows in its echelon form of matrix.

Q.4) The rank of matrix $A = \begin{bmatrix} 1 & 2 & 3 \\ 2 & 2 & 2 \\ 3 & 3 & 3 \end{bmatrix}$ is equal to

A) 4 B) 3 C) 2 D) 1

Q5) If $A = \begin{bmatrix} 1 & 2 & 3 \\ 3 & 4 & 5 \\ 4 & 5 & 6 \end{bmatrix}$ and det(A)=0 then rank of a matrix A is

A) Greater than or equal to 3 B) Strictly less than 3

C) Less than or equal to 3 D) Strictly greater than 3 .

Q.6) Which of the following matrix is in normal form?

A) $\begin{bmatrix} 1 & 0 & 0 \\ 0 & 1 & 0 \\ 0 & 0 & 0 \end{bmatrix}$ B) $\begin{bmatrix} 0 & 0 & 0 \\ 0 & 1 & 0 \\ 0 & 0 & 1 \end{bmatrix}$ C) $\begin{bmatrix} 1 & 1 & 1 \\ 0 & 1 & 0 \\ 1 & 1 & 1 \end{bmatrix}$ D) $\begin{bmatrix} 0 & 0 & 0 \\ 0 & 0 & 0 \\ 0 & 1 & 0 \end{bmatrix}$

Q.7) Which of the following matrix is in the Normal form?

A) $\begin{bmatrix} 1 & 1 & 0 & 0 \\ 0 & 1 & 0 & 0 \\ 0 & 0 & 1 & 0 \end{bmatrix}$ B) $\begin{bmatrix} 1 & 0 & 0 & 0 \\ 0 & 1 & 0 & 1 \\ 0 & 0 & 0 & 1 \end{bmatrix}$ C) $\begin{bmatrix} 1 & 0 & 0 & 0 \\ 0 & 1 & 0 & 0 \\ 0 & 0 & 1 & 0 \\ 0 & 0 & 0 & 0 \end{bmatrix}$ D) $\begin{bmatrix} 1 & 1 & 1 \\ 0 & 1 & 1 \\ 0 & 0 & 1 \end{bmatrix}$

Q.8) The rank of matrix $\begin{bmatrix} 10 & 10 & 10 & 10 & 10 \\ 10 & 10 & 10 & 10 & 10 \\ 10 & 10 & 10 & 10 & 10 \end{bmatrix}$ is

A) 10 B) 5 C)2 D)1.

Q.9)The rank of the matrix $\begin{bmatrix} 1 & 1 & 1 \\ 1 & -1 & 0 \\ 1 & 1 & 1 \end{bmatrix}$ is ,

A)0 b) 1 c) 2 d) 3

Q.10) For matrix A of order mxn, the rank r of matrix A is

A) $r \geq \min\{m,n\}$ B) $r \geq \max\{m,n\}$

C) $r \leq \min\{m,n\}$ D) $r \leq \max\{m,n\}$

Q.11)For non singular matrix A If PAQ is in normal form then A^{-1} is equal to

A)PQ B) QP C) P+Q D) Q-P

Q.12) A 5×7 matrix has all its entries equal to -1 , then rank of matrix is

A)7 B) 5 C) 1 D) zero

Q.13) The rank of the following matrix by determinant method $\begin{bmatrix} 2 & 3 & 4 \\ 4 & 3 & 1 \\ 1 & 2 & 4 \end{bmatrix}$ is

A)2 B) 3 C) 1 D) 0

Q.14)If P=3 then the rank of matrix $A = \begin{bmatrix} 3 & P & P \\ P & 3 & P \\ P & P & 3 \end{bmatrix}$.

A)1 B) 2 C) 3 D) 0

Type II) System of Linear Equations & LD/ID, Linear Transform and Orthogonal Transforms.

Q.15) Given system of linear equations x-4y+5z=-1, 2x-y+3z=1,3x+2y+z=3 has

A) unique solution B) no solution

C) infinitely many solutions D) n-r solutions

Q.16) In given system of linear equations AX=B,

if Rank (A) = rank (A/B) =Number of unknowns then the system is,

A) inconsistent & system has no solution B)Consistent & system has infinite solutions

C) Consistent & system has unique solution D) None of the above

Q.17) In given system of linear equations AX=B, A is square matrix of order n.

If Rank (A) =rank (A/B) <Number of unknowns then the system is,

A)inconsistent & system has no solution B)Consistent & system has infinite solutions

C) Consistent & system has unique solution D) None of the above

Q.18) In given system of linear equationsAX=B, if det(A) ≠ 0 then system has

A)Unique solution B)No solution C)infinite solutions D) None of the above

Q.19)In set of vectors , if at least one vector of the set can be expressed as a linear combination of the remaining vectors then these vectors are called

A)Linearly independent B)linearly dependent

C)Orthogonal vectors D) none of these

Q.20) If two linear transformations are $y = Ax$ and $z = By$ then composite transformation which Converts vector **x** in to a vector **z** is

A) $z = BAx$ B) $z = A^{-1}B^{-1}x$

C) $z = B^{-1}A^{-1}x$ D) $z = ABx$

Q.21) A Linear transformation $y = Ax$ is said to be orthogonal if A is

A) Orthonormal matrix B) Orthogonal matrix

C) Symmetric Matrix D)Singular Matrix

Q.22)Non- Homogeneous system of linear equations AX=B is consistent if and only if

A) $\rho(A) > \rho([A/B])$ B) $\rho(A) \neq \rho([A/B])$

C) $\rho(A) < \rho([A/B])$ D) $\rho(A) = \rho([A/B])$

Q.23) A is mxn matrix and AX=B is system of linear equations then AX=B has unique solution if and only if

A) $\rho(A) = \rho([A/B]) = m$ B) $\rho(A) = \rho([A/B]) = n$

C) $\rho(A) = \rho([A/B])$ D) $\rho(A) = \rho([A/B]) < m$

Q.24) A is mxn matrix and AX=B is system of linear equations then AX=B has infinite number of solution if and only if

A) $\rho(A) = \rho([A/B]) = m$ B) $\rho(A) = \rho([A/B]) < n$

C) $\rho(A) = \rho([A/B]) < m$ D) $\rho(A) = \rho([A/B]) > m$

Q.25) Every homogeneous system of linear equations is

A) Always consistent B) May or may not be consistent

C) Never consistent D) none of these

Q.26)In a given system of equations AX=B, if $\rho(A) \neq \rho(A/B)$ then the system of equations is,

A)Consistent B) Inconsistent

C)Has a Unique solution. D)Infinite solutions.

Q.27)The system of linear equations 4x+2y=7 , 2x+y=6 has

A)A unique solution B)No solution

C) infinite no. of solution D)Exactly two distinct solutions.

Q.28)Consider following system of linear equations in three real variables x, y & z
2x-y+3z=1, 3x+2y+5z=2, -x+4y+z=3. The system has

A) No solution B) An infinitely many solutions

C) unique solution D) more than one but finite no. of solutions

Q.29) Consider following system of linear equations in three real variables x, y & z

2x-y+3z=0,3x+2y+5z=0,-x+4y+z=0. The system has solution

A) x=0, y=0,z=0 B) x=1,y=3,z=0 C) x=-9,y=5,z=1 D)x=-1,y=-2,z=6

Q.30)A is a 3×4 real matrix & AX=B is an inconsistent system of linear equation Then the highest possible rank of A is

A)1 B) 2 C) 3 D) 4

Q.31) For what value of b the matrix $A = \frac{1}{13}\begin{bmatrix} b & -5 \\ 5 & b \end{bmatrix}$ is an orthogonal?

A) ±5 B) ±13 **C)** ±12 D) ±16

Q. 32) The determinant of orthogonal matrix is always

A) Greater than -1 B) less than +1 C) Equal to 0 D) Equal to +1 or -1.

Q.33) If $A^T = A^{-1}$ then A is ,

A)Symmetric B) Skew Symmetric C) Orthogonal D) None of these

Q.34)If A is an Orthogonal matrix then A^{-1} is equal to ,

A) A B) A^T C) A^2 D) $-A^T$

Type III] Eigen Values, Eigen Vectors,Cayley Hamilton Theorem.

Q.35) If **x** is eigen vector of matrix A corresponding to eigen value λ then **x** and **kx** ,k < 0

A) has same direction as that of **x** B) has opposite direction

C) **x** is orthogonal to **kx** D) **x** is parallel to **kx**

Q.36) If A is any square matrix then its characteristic equation is given by

A) $\det(A-\lambda I)=0$ B) $(A-\lambda I)=0$ C) $\det(A-\lambda A)=0$ D) $(A-\lambda A)=0$

Q.37) If eigen values of matrix A are 1,2,3 then eigen values of matrix $2A^2$ are

A)-1,-2,-3 B)1,2,3 C)2,4,9 D) 2,8,18

Q.38) The characteristics roots of the matrix $\begin{bmatrix}1&1&1\\1&1&1\\1&1&1\end{bmatrix}$ are

A) (0,0,0) B)(0,0,3) C) (0,0,1) D) (1,1,1)

Q.39)Find sum of the eigenvalues of the matrix $\begin{bmatrix}2&-3\\4&-2\end{bmatrix}$

A)2 B)4 C) 0 D) 1

Q.40)Find product of eigenvalues of matrix $\begin{bmatrix}2&-3\\4&-2\end{bmatrix}$

A)4 B)8 C) 6 D) 2

Q.41)The product of two eigen values of the matrix $A=\begin{bmatrix}6&-2&2\\-2&3&-1\\2&-1&3\end{bmatrix}$ is 16. Find the third eigenvalue.

A)1 B)2 C) 4 D) 3

Q.42) For a given matrix A of order 3×3, det(A)=32 & two of its eigenvalues are 8 & 2. Find sum of eigenvalues

A)12 B)8 C) 10 D) 2

Q.43) If 2 & 3 are eigenvalues of $A=\begin{bmatrix}2&0&1\\0&2&0\\1&0&2\end{bmatrix}$ find the third eigenvalue

A)2 B)3 C)1 D) 4

Q.44) If 1, 2 & 3 are the eigen values of $A=\begin{bmatrix}2&0&1\\0&2&0\\a&0&2\end{bmatrix}$, find the value of a?

A)1 B)0 C) 2 D) 3

Q.45) The characteristic equation of the matrix $A=\begin{bmatrix}14&-10\\5&-1\end{bmatrix}$ is ,

A) $\lambda^2+5\lambda+21=0$ B) $\lambda^2-13\lambda+36=0$

C) $\lambda^2+13\lambda+36=0$ D) $\lambda^2+13\lambda-36=0$

Q.46) Find the eigen values of the matrix $A=\begin{bmatrix}14&-10\\5&-1\end{bmatrix}$

A) $\lambda_1=4,\lambda_2=9$ B) $\lambda_1=5,\lambda_2=6$

C) $\lambda_1=18,\lambda_2=2$ D) $\lambda_1=10,\lambda_2=3$

Q.47) Two eigen values of the matrix $A=\begin{bmatrix}2 & 2 & 1\\ 1 & 3 & 1\\ 1 & 2 & 2\end{bmatrix}$ are 1 &1, find the 3rd eigenvalue of A.

A)1 B)3 C) 5 D)4

Q.48)Two eigenvalues of the matrix $A=\begin{bmatrix}2 & 2 & 1\\ 1 & 3 & 1\\ 1 & 2 & 2\end{bmatrix}$ are 1 & 1 find the eigenvalues of A^{-1}

A)1/1 , 1/1 , 1/5 B)½ , 1 , 5 C)½ , ½ , 5 D)1 , 1 , 5

Q.49) Form the matrix whose eigenvalues are $\alpha-5,\beta-5,\gamma-5$ where α,β,γ the eigenvalues of are $A=\begin{bmatrix}-1 & -2 & -3\\ 4 & 5 & -6\\ 7 & -8 & 9\end{bmatrix}$

A) $\begin{bmatrix}-1 & -2 & -3\\ 4 & 5 & -6\\ 7 & -8 & 9\end{bmatrix}$ B) $\begin{bmatrix}-6 & -2 & -3\\ 4 & 0 & -6\\ 7 & -8 & 4\end{bmatrix}$ C) $\begin{bmatrix}-1 & 2 & -3\\ -4 & 5 & 6\\ 7 & 8 & 9\end{bmatrix}$ D) $\begin{bmatrix}4 & -2 & -3\\ 4 & 10 & -6\\ 7 & -8 & 14\end{bmatrix}$

Q.50) If the characteristic equation of one matrix is $\lambda^3-4\lambda^2-\lambda+4=0$ then find the Eigen values of that matrix

A)1 , 2 , 3 B)1 , 1 , 4 C) -1 , 1 , 4 D) 1 , 1 , 5

Q.51) For a singular matrix of order $3X3$, 2 and 3 are the eigenvalues. Find its 3rd eigenvalue.

A)1 B) 0 C) 2 D) 3

Q.52) What is the characteristic equation of the matrix $\begin{bmatrix}1 & -1 & 0\\ -1 & 2 & 1\\ 0 & 1 & 1\end{bmatrix}$

A) $\lambda^3-4\lambda^2+3\lambda=0$ B) $\lambda^3-4\lambda^2+3\lambda+1=0$ C) $\lambda^3+4\lambda^2+3\lambda=0$ D) $\lambda^3-4\lambda^2-3\lambda=0$

Q.53) Determinant of square matrix is equal to

A) Sum of all elements B) Product of diagonal elements
C) Product of its eigen values D) Sum of its eigen values .

Q.54) If 1,2,3 are eigen values of matrix A then eigen values of matrix A^3 are

A)1,8,27 B) 1,4,9, C) 2,3,4, D) 4,5,6

Q.55) If λ is eigen value of matrix A then eigen values of matrix A^{-1} is

A) λ B) $-\lambda$ C) $\frac{1}{\lambda}$ D)1.

Q.56) If λ is eigen value of matrix A then eigen values of matrix kA is

A) kλ B) $-\lambda$ C) $\frac{1}{k\lambda}$ D) λ.

Q.57) If λ is eigen value of matrix A then eigen values of matrix A+kI is

A) kλ B) $\lambda+k$ C) $\frac{1}{k\lambda}$ D) $\lambda-k$.

Q.58) If λ is eigen value of matrix A then eigen values of matrix A^n is

A) n λ B) λ^n C) $\frac{n}{\lambda}$ D) λ.

Q.59) If $\lambda_1, \lambda_2, \lambda_3$ are eigen values of matrix A then eigen values of A^{-1} are

A) $\frac{1}{\lambda_1}, \frac{1}{\lambda_2}, \frac{1}{\lambda_3}$ B) $\lambda_1, \lambda_2, \lambda_3$ C) $\lambda_1^2, \lambda_2^2, \lambda_3^2$ D) $-\lambda_1, -\lambda_2, -\lambda_3$

Q.60) The sum & product of the eigen values of matrix $\begin{bmatrix} 2 & -3 \\ 4 & -2 \end{bmatrix}$ are

A)0,0 B)4,8 C)0,8 D) 2,-2

Q.61) For the matrix $\begin{bmatrix} 1 & -2 & 3 \\ 0 & -2 & 5 \\ 0 & 0 & 4 \end{bmatrix}$ product of the eigen values is

A)-8 B) 4 C)1 D) -2

Q. 62) The eigen values of the matrix $\begin{bmatrix} 1 & 4 \\ 2 & 3 \end{bmatrix}$ are

A) 2,3 B)4,5 C) 0,2 D) 5,-1

Q.63) The Characteristic equation of the matrix $\begin{bmatrix} 3 & 1 & 1 \\ -1 & 5 & -1 \\ 1 & -1 & 3 \end{bmatrix}$ is

A) $\lambda^3 - 11\lambda^2 + 38\lambda - 40 = 0$ B) $\lambda^3 - 11\lambda^2 + 38\lambda + 40 = 0$

C) $\lambda^3 + 11\lambda^2 + 38\lambda + 40 = 0$ D) $\lambda^3 + 11\lambda^2 + 38\lambda + 40 = 0$

Q.64) If the Characteristic equation of the matrix A of order 3x3 is $\lambda^3 - 3\lambda^2 + 3\lambda - 1 = 0$ then by Cayley Hamilton

Theorem A^{-1} is equal to

A) $A^3 - 3A^2 + 3A - I$ B) $A^2 - 3A - 3I$

C) $3A^2 - 3A - I$ D) $A^2 - 3A - 3I$

Q.65) If $\lambda^2 - S_1\lambda + S_2 = 0$ is a characteristic equation of 2x2 matrix A then

A) S_1 = Sum of principle diagonal elements, S_2 = Sum of all elements

B) S_1 = Sum of principle diagonal elements, S_2 = Product of principle diagonal elements

C) S_1 = Trace of matrix A, S_2 = Product of principle diagonal elements

D) S_1 = Trace of matrix A, S_2 = Product of Eigen values of matrix A.

Q.66) If $\lambda^3 - S_1\lambda^2 + S_2\lambda - S_3 = 0$ is a characteristic equation of 3x3 matrix A then

A) S_1 = Sum of principle diagonal elements, S_2 = Sum of all elements, $S_3 = |A|$

B) S_1 = Sum of principle diagonal elements, S_2 = Product of principle diagonal elements, $S_3 = |A|$

C) S_1 = Trace of matrix A, S_2 = sum of minors of Principle diagonal elements, $S_3 = |A|$

D) S_1 = Trace of matrix A, S_2 = Product of Eigen values of matrix A, $S_3 = |A|$

Q.67) The characteristic equation of matrix $\begin{bmatrix} 14 & -10 \\ 5 & -1 \end{bmatrix}$ is

A) $\lambda^2 - 13\lambda + 36 = 0$ B) $\lambda^2 - 13\lambda - 36 = 0$ C) $\lambda^2 - 4\lambda - 64 = 0$ D) $\lambda^2 - \lambda + 36 = 0$

Q.68) The characteristic equation of matrix $\begin{bmatrix} 4 & 6 & 6 \\ 1 & 3 & 2 \\ -1 & -4 & -3 \end{bmatrix}$ is

A) $\lambda^3 - 4\lambda^2 + \lambda - 4 = 0$ B) $\lambda^3 + 4\lambda^2 - \lambda + 4 = 0$ C) $\lambda^3 - \lambda^2 + \lambda - 4 = 0$ D) $\lambda^3 - 4\lambda^2 - \lambda + 4 = 0$

Q.69**)** If all eigen values of matrix A_{3x3} are distinct then which of the following is true

A) Matrix A_{3x3} has three equal Eigen vectors

B) Matrix A_{3x3} has three distinct eigen vectors

C) Matrix A_{3x3} has three distinct linearly independent eigen vector**s**

D)) Matrix A_{3x3} has more than three Eigen vectors.

Q.70) If two or more eigen values are equal then corresponding eigen vectors

A) always Linearly Dependent B) always Linearly Independent

C) may or may not be Linearly Independent D) none of these

Q.71) The eigen vectors corresponding to distinct eigen values of a real symmetric matrix are

A) Linearly Dependent B)Linearly Independent C) Orthogonal D) Orthonormal

Q.72) The eigen values of matrix $\begin{bmatrix} 1 & 2 & 3 & 4 \\ 0 & -1 & 2 & 3 \\ 0 & 0 & 5 & 3 \\ 0 & 0 & 0 & -4 \end{bmatrix}$ are

A)-1,1,-5,4 B)1,-1,5,-4 C)0,0,0,0 D) -1,-1,-5,-4

Q.73) The eigenvalues of matrix $\begin{bmatrix} 1 & 1 & 1 \\ 1 & 1 & 1 \\ 1 & 1 & 1 \end{bmatrix}$ are

A)0,0,0 B) 0,0,1 C) 0,0,3 D) 1,1,1

Q.74) Consider the two statements

(i) a particular eigen value may be zero. (ii) a particular eigen vector may be zero.

which of the above correct.

A) only (i) B) only (ii) C) Both (i) and (ii) D) Both are incorrect.

Q.75) Cayley Hamilton Theorem is

A) Every symmetric matrix satisfies its own characteristic equation

B) Every square matrix satisfies its own characteristic equation.

C) Every orthogonal matrix satisfies its own characteristic equation

D) Every real symmetric matrix satisfies its own characteristic equation

Q.76)If $A = \begin{bmatrix} 1 & 0 \\ 1 & 7 \end{bmatrix}$ then value of k for which $A^2 = 8A + kI$ is

A) 5 B)7 C)-5 D)-7

Q.77) If $A = \begin{bmatrix} 1 & 2 \\ 2 & -1 \end{bmatrix}$ then A^8 is

A) $A^8 = 5I$ B) $A^8 = 25I$ C) $A^8 = 65I$ D) $A^8 = 625I$

Q.78) Two eigen values of $A = \begin{bmatrix} 4 & 6 & 6 \\ 1 & 3 & 2 \\ -1 & -5 & -2 \end{bmatrix}$ are equal and are double the third then the eigen values

A^2 are

A) 1,4,4 B) 3,2,1 C) 4,9,16 D) 25,4,9

Q.79) If $A=\begin{bmatrix}1 & 2 & -3\\ 0 & 3 & 2\\ 0 & 0 & -2\end{bmatrix}$ then the eigen values of $3A^3+5A^2-6A+2I$ are

A)5,-6,2 B)1,3,-2 C) 3,5,6 D) 4,110,10

Q.80) Sum and product of the eigen values of matrix $A=\begin{bmatrix}-1 & 1 & 1\\ 1 & -1 & 1\\ 1 & 1 & -1\end{bmatrix}$ is

A) -3,-1 B)-3,4 C) 4,3 D)1,-3

Q.81) If $A=\begin{bmatrix}1 & 2\\ 3 & 4\end{bmatrix}$ then

A) $A^{-1}=\begin{bmatrix}1 & 3\\ 2 & 4\end{bmatrix}$ B) $A^{-1}=\begin{bmatrix}1 & \frac{1}{2}\\ \frac{1}{3} & \frac{1}{4}\end{bmatrix}$ C) $A^{-1}=\begin{bmatrix}-2 & 1\\ \frac{3}{2} & \frac{-1}{2}\end{bmatrix}$ D) A^{-1} does not exist.

Q.82) If 2,3,6 are the eigen values of matrix $A=\begin{bmatrix}3 & -1 & 1\\ -1 & 5 & -1\\ 1 & -1 & 3\end{bmatrix}$ then the eigen values of matrix A^3+2I are

A) 20,39,228 B)10,29,218 C) 0,19,208 D) 3,5,3

Q.83)Eigenvalues of matrix $A=\begin{bmatrix}3 & 2\\ 2 & 3\end{bmatrix}$ are 5 &1 .what are the eigen values of matrix A^2

A) 1 & 25 B) 2 & 10 C) 6& 4 D) 5 & 1

GENERAL:

Q84)If $D=diag(d_1,d_2,d_3,....d_n)$ where $d_i\neq 0$ for all i=1,2,3,....n ,then D^{-1} is equal to ,

A)D B) $diag(d_1^{-1},d_2^{-1},d_3^{-1},....d_n^{-1})$ C) I_n D) None of these

Q85)If $A=diag(d_1,d_2,d_3,....d_n)$ then A^n is equal to ,

A) $diag(d_1^{n-1},d_2^{n-1},d_3^{n-1},....d_n^{n-1})$ B) $diag(d_1^{n},d_2^{n},d_3^{n},....d_n^{n})$

C) A D)None of these.

Q86)If $A=\begin{bmatrix}1 & -5 & 7\\ 0 & 7 & 9\\ 1 & 8 & 9\end{bmatrix}$, then Trace of the matrix A is ,

A)17 B) 25 C) 10 D) 63

ANSWERS

Que	Ans	Que	Ans	Que	Ans	Que	Ans	Que	Ans
1	C	21	B	41	B	61	A	81	C
2	C	22	D	42	A	62	D	82	B
3	D	23	B	43	C	63	A	83	A

4	C	24	B	44	A	64	D	84	B
5	B	25	A	45	B	65	D	85	B
6	A	26	B	46	A	66	C	86	A
7	C	27	B	47	C	67	A		
8	D	28	C	48	A	68	D		
9	C	29	A	49	B	69	C		
10	C	30	B	50	C	70	B		
11	B	31	C	51	B	71	C		
12	C	32	D	52	D	72	B		
13	B	33	C	53	C	73	C		
14	A	34	B	54	A	74	A		
15	C	35	B	55	C	75	B		
16	C	36	A	56	A	76	D		
17	B	37	D	57	B	77	D		
18	A	38	B	58	B	78	A		
19	B	39	C	59	A	79	D		
20	A	40	B	60	C	80	B		

MCQ Of Complex Numbers

Type I: Problems on Basic Definition.

Q.1.What is the value of complex number $i^{135.}$

A) 135 B)i C)-1 D)-i