Question Bank

1] evaluate $log_3 81 =$

2]$evaluate\ \ log_5 125$ =

3]find value of log_3(x +6)=....

4] find value of log_4(x -10)= 0

5] find value of log_4(3x -5)= 0

6]If the determinant of the matrix A is zero then matrix A is called ..... ans singularmatrix

7]unit matrix of order [2x2] is given by.... ans ...$\begin{bmatrix}1 & 0\\0 & 1\end{bmatrix}$.

8]transpose of row matrix is called.....coloumn matrix

9]the matrix in which number of rows and number of columns are same then matrix is called . [square matrix]

10]null matrix is also called as.....[zero matrix]

11]Find k if the following points are collinear [0,1],[1,2],[k,-1]....

12]if the degree of numerator is greater than or equal to degree of the denominator then the frac tion is called .....[improper]

13]the condition for a square matrix A having its inverse is if ....$|A|$not equal to 0

14]A diagonal matrix in which all principal diagonal elements are same then the matrix is called....[scalar]

15]the transpose of cofactor matrix is called.....[adjoint of matrix]

16]if the degree of denominator is greater than numerator then the fraction is called.....[proper fraction]

17]if A=$\begin{bmatrix}1 & 0\\1 & 0\end{bmatrix}$ and B =$\begin{bmatrix}0 & 1\\1 & 0\end{bmatrix}$ then A.B =.....$\begin{vmatrix}0 & 1\\0 & 1\end{vmatrix}$

18]If $\frac{1}{[x+3][x+2]} = \frac{A}{x+3} + \frac{B}{x+2}$ find A and B.....A= -1 and B=1

19]write down following fraction in partial fraction

$$\frac{2x+3}{[x^2+1].[x]}$$

20]write down fraction in partial fraction

$$\frac{2}{x^2[x-1]}$$

21]the proper fraction of improper fraction $\frac{x+1}{x-1}$ is.....

22]Expansion of fraction $\frac{1}{x^2-4}$ =.....1/[x-2].[x+2] = A/[x-2] + B/[x+2]

23]condition for two lines are parallel is .....[equal slopes]

24]the slope of line Ax +By +c =0 is..... -A/B

25]Equation of line passing through point [0,0] having slope 3 is.....y-0 = 3[x-o]

26]the x- intercept of line $\frac{x}{2} - \frac{y}{3} = 2$is.....-[1/2] /[-1/3]

27]point of intersection of two lines x +y = 4 and 2x- y = 8 is....

28]if m1 and m2 are slopes of two lines then the condition of slopes when two lines are perpendicular is .....m1xm2=-1

29]find x $\begin{vmatrix} 1 & 0 & 1 \\ x & 1 & 2 \\ 4 & 1 & 0 \end{vmatrix}$ = 0.....x=6

30]Area of triangle is given by the formula having vertices are [x1,y1],[x2,y2],[x3,y3].

31]If x- intercept is 4 and y- intercept is 5 then equation of line is.....

32]If A and B are two square matrix ,then $|A.B|$= ans.= $|A.B| = |A|.|B|$

33] Resolve into partial fraction...$\frac{1}{x[x-1]}$

34] if A=$\begin{bmatrix} 2 & 3 \\ 3 & 0 \end{bmatrix}$ and B =$\begin{bmatrix} -2 & 1 \\ 1 & 0 \end{bmatrix}$ then A.B =...

35] if A=$\begin{bmatrix} 18 & 41 \\ 7 & 15 \end{bmatrix}$ and B =$\begin{bmatrix} -2 & 11 \\ -23 & 0 \end{bmatrix}$ then A+B =...

36] If m_1 and m_2 be the slope of two lines, then angle between two lines is given by...
tan θ = $\left|\frac{m_{1+m_2}}{m_{1.m_2}}\right|$

37] Simplify $\log_2 14 - \log_2 7$ =

38]Find x if $\log_3[x+6]$ = 2

39] Find x if $\begin{vmatrix} 1 & 0 & 1 \\ x & 1 & 2 \\ 4 & 1 & 0 \end{vmatrix}$ =...

40]Find matrix x if $\begin{bmatrix} 4 & 5 \\ -3 & 6 \end{bmatrix}$ + x = $\begin{bmatrix} 10 & -1 \\ 0 & -5 \end{bmatrix}$

41]If A = $\begin{bmatrix} 2 & 3 \\ 4 & 7 \end{bmatrix}$ and B = $\begin{bmatrix} 1 & 3 \\ -2 & 5 \end{bmatrix}$ find 2A + 3B -5I where I is identity matrix.

42] If A= $\begin{bmatrix} 1 & 2 \\ 5 & 3 \end{bmatrix}$ and B = $\begin{bmatrix} 2 & 6 \\ -3 & 4 \end{bmatrix}$ find $[A.B]^T$

43]For any non singular matrix $A\ inverse\ of\ matrix\ means\ A^{-1}$ is given by the formula....

44] If $\frac{1}{x[x-1]} = \frac{A}{x} + \frac{B}{x-1}$ then value of A and B becomes..

45] Expand following fraction into partial fraction $\frac{x^2+23x}{[x+3][x^2+1]}$ =

46] Perpendicular distance from point A$[x_1, y_1]$ on line Ax + By + C = 0 is given by ..

$\left|\frac{Ax_1-By_1+C}{\sqrt{A^2+B^2}}\right|$

47]Perpendicular distance between two parallel lines is given by the formula.....

48]slope of a lin e passing through the point [3,4] and [-4,6] is given by.....[-2/7]

49]Find equation of a line having xintercept 2 AND y intercept is 3.....[x/2 + y/3 = 0]

50]Find angle between lines 3x - 4y = 420 and 4x +3y = 420.....[.angle 90 degree]

51] Evaluate $\log_{10} \sqrt[3]{1000}$

52] Evaluate $12^{\log_{2\sqrt{3}} 5}$

53] Evaluate $\log_2 64 - \log_2 8$

54] Evaluate $\begin{vmatrix} 6 & 9 & 12 \\ 2 & 3 & 4 \\ 5 & 9 & 13 \end{vmatrix}$ using determinant method

55]Area of a triangle having vertices $[x_1, y_1]$,$[x_2, y_2]$ and $[x_3, y_3]$

56] a square matrix is called non-singular matrix if..... $|A|$ not zero

57]Find the value of x and y satisfying the following equation.

$\begin{bmatrix}1 & x & 0\\ y & 2 & 4\end{bmatrix}+\begin{bmatrix}3 & 1 & 2\\ 4 & 3 & -2\end{bmatrix}=\begin{bmatrix}4 & 2 & 2\\ 6 & 5 & 2\end{bmatrix}$

58]If A=$\begin{bmatrix}2 & 3 & 2\\ 0 & -1 & 5\end{bmatrix}$, B = $\begin{bmatrix}1 & 2 & 1\\ 0 & -1 & 3\end{bmatrix}$ Evaluate 3A - 4B

59] find $|A.B|$ if A = $\begin{bmatrix}5 & 4\\ 4 & 3\end{bmatrix}$ and B =$\begin{bmatrix}-3 & 4\\ 4 & -5\end{bmatrix}$

60] Resolve into partial fraction

61] if $\frac{e^x}{[e^x+2][e^x+3].}=\frac{A}{e^x+2}+\frac{B}{e^x+3}$ then A and B becomes...

62] If $\frac{X+5}{X^2-X}=\frac{A}{X}+\frac{B}{X-1}$ then A and B becomes.

63] Expand in partial fraction.$\frac{x^2-2x+7}{[x+1][x-1]^2}$ =

64] Expand $\frac{x^2+23x}{[x+3][x^2+1]}$ =.....in partial fraction

64] $resolve\ into\ partial\ fraction\ \frac{1}{x^2-1}=\frac{A}{x-1}+\frac{B}{x+1}$

65]If the given square matrix is $\begin{bmatrix}1 & 0 & -1\\ 3 & 4 & 5\\ 0 & -6 & -7\end{bmatrix}$ then what is a cofactor of element a_{12} ?.....[a_{12}means element present in 1st row and 2nd column]

66]By which method we find A^{-1}.in matrix. ans [adjoint method]

67]If matrix A= $\begin{bmatrix}2 & 3 & -1\\ 4 & 5 & 0\end{bmatrix}$ and B = $\begin{bmatrix}-1 & 2 & 4\\ 1 & 3 & 0\end{bmatrix}$ Find $[A+B]^T$