

Paper: MathsMonth Test: May

Theme/Unit: _____

Subjective: _____

Name: _____

ID: _____

class: 9thTotal Marks: 60

Obt. Marks: _____

Grand Total: 75

Time: _____

Section: _____

Part- I

Q. NO. 2: Answer the following questions:

1) Define matrix.

2) Which satisfy the matrix equation:

$$\begin{bmatrix} a+c & a+2b \\ c-1 & 4d-6 \end{bmatrix} = \begin{bmatrix} 0 & -7 \\ 3 & 2d \end{bmatrix}$$

3) Find the negative of matrix $\begin{bmatrix} 1 & -5 \\ 2 & 3 \end{bmatrix}$ 4) Find the product $\begin{bmatrix} -3 & 0 \end{bmatrix} \begin{bmatrix} 4 \\ 0 \end{bmatrix}$ 5) Find the determinant of $A = \begin{bmatrix} 3 & 1 \\ 2 & 4 \end{bmatrix}$ 6) Find multiplicative inverse (if exist) $A = \begin{bmatrix} -1 & 3 \\ 2 & 0 \end{bmatrix}$

Q. No. 3:

1) Represent the number on number line $-2\frac{3}{4}$ 2) Express recurring decimals in form of $\frac{p}{q}$ (a). $0.\bar{5}$ 3) Simplify radical expressions $5\sqrt{\frac{3}{32}}$ 4) Use law of exponent if $(2x^5y^{-4})(-8x^{-3}y^2)$ 5) Evaluate 2^{27} 6) Simplify in form of $a+bi$ $(-7+3i)(-3+2i)$

Q. No. 4:

1) Define scientific notation also give one example.

2) If $\log 31.09 = 1.4926$ find the value of $\log 0.003109$ 3) Find the value of x from statement $\log_{81} 9 = x$ 4) Express $\log x - 2 \log x + 3 \log(x+1) - \log(x^2-1)$ as a single logarithm.5) Calculate $\log_3 2 \times \log_2 81$ 6) If $\log 2=0.3010$, $\log 3=0.4771$, $\log 5=0.6990$ find the value of $\log 30$.

Part – II

Q. No. 5: (a) If $A = \begin{bmatrix} 1 & 2 \\ 4 & 6 \end{bmatrix}$ and $B = \begin{bmatrix} 3 & -1 \\ 2 & -2 \end{bmatrix}$ then $A(\text{Adj } A) = (\text{Adj } A) A = (\det A)I$ /4

(b). Use cramer's rule to solve system of equations: /4

$$3x - y = -1$$

$$4x + 2y = 8$$

Q. No. 6: (a). Solve the equation for real x and y $(2 - 3i)(x + yi) = 4 + i$ /4

(b). Simplify: $\sqrt{\frac{(216)^{\frac{2}{3}} \times (25)^{\frac{1}{2}}}{(0.04)^{-\frac{3}{2}}}}$ /4

Q. No, 7: (a) Prove $\log_a\left(\frac{m}{n}\right) = \log_a m - \log_a n$ /4

(b). Evaluate: (i). $\log_2 \frac{1}{128}$ (ii). $10^P = 40$ /4