

Oriental Education Society's

ORIENTAL COLLEGE OF PHARMACY

[DTE CODE NO: PH 3231] [UNIVERSITY CODE NO: 694]

LINGUISTICS MINORITY (HINDI) COLLEGE

SEMESTER EXAMINATION

B.Pharm First year (Sem-I)(PCI Syllabus)

Remedial Mathematics

Max. Marks: 35

Times: pm to pm

Date 17/04/2025

Q.No.	QUESTIONS	TOTAL LMKS
SOLVE ANY 6 FROM 8		
Q1.	Attempt any one of the following: - 1. Explain any 5 types of matrixes and find the determinant $\begin{bmatrix} 2 & -1 & 5 \\ 3 & 4 & 2 \\ 1 & -2 & -1 \end{bmatrix}$ 2. 1) A straight line passes through a point $(-2,1)$ and has a slope $\sqrt{3}$ Find the equation of the line in symmetric form. Also, find the coordinates of a point on the line at a distances of 2 unit 2) Find the slope of the line through the points $(0, -4)$ and $(-6,2)$	10
Q2.	Attempt any five of the following :- (5 Marks Each) 1. Solve the following system of linear equation with the help of cramer's rule $X+2y+3z = 6$, $2x+4y+z = 7$, $3x+2y+9z = 14$ 2. Find the distances between the points A. $(1, -2)$ $(2, -3)$ B. $(5, 4)$ $(-5, 6)$ 3. Calculate $\frac{dy}{dx}$ if 1) $y = x^2 \log x$ 2) $y = x^4 + 9x^2 + 2x - 1$ 4. Show that the four points whose coordinates are $(0,5)$, $(-2,-2)$, $(5,0)$ and $(7,7)$ form a rhombus. 5. Find the value of x , such that the points $(x,-1)$, $(5,7)$ and $(8,11)$ are collinear. 6. Given that the rate at which some bacteria multiply is proportional to the instantaneous number. If the number f bacteria doubles in two hours then in how many hours will it be given times? 7. Prove that the quadrilateral with vertices $(3, 2)$, $(0, -5)$, $(-3, 2)$, $(0, -1)$ is a square.	25