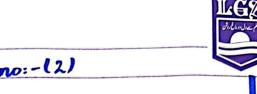
LGX	LGS GROUP OF COLLEGES A PROJECT OF LAHORE GRAMMAR SCHOOL
Name	Class: 1st year (ICS) Roll No. 240302 Test No. Date: 28-11-2024
1 2 3 4 5	Marks Obtained Marks Obtained Marks Obtained
	Subjective Type
	Short Answers Ans no:-(1)
	Semi Group: red semi group is a mothematical structure that consist of a set and an associative binary operation on a set. Semi-group have similar properties to groups, but the properties of semi-group
-0-	* Ex: ** Positive integer with multiplication.
	Ans no:-13) Ans no:-13 Au = A = [i 0][i 0] Au = A^2 - A^2 -i -i -i = [-1 0][-1 0] Au = A^2 - A^2 Au = A^2
	$= R^{2} = \begin{bmatrix} i^{2} & 0 \\ 0 & i^{2} \end{bmatrix} = R^{4} = \begin{bmatrix} (-1)(-1)+(0)(0) & (-1)(0)+(0)(0) \\ (0(-1)+(-1)(0) & (0)(0)+(-1)(0) \end{bmatrix}$

= A4 = 1 + 0

 $A^2 =$



	Ans no:-(2)	J
	** Table s—	_
	$\frac{\{x\}[0][1][2][3][4]}{[0][0][0][0][0][0][4]}$ = $[0][0][0][0][0][0][4]$	
	[2][0][2][4][4][3] [3][0][3][1][1][2] [4][0][4][3][2][1]	
	Note: The element of the set are the residue classes 5, which are [0,1,2,3,4]	
	long Answer	
	Sol:-	
	get $A = [a, b], [c, d]$ $B = [e, \beta], [g, h]$	
1	be two 2x2 mon - singular mallite. the	
	their product AB is given by. AB = [ae + bg, af + bh], [ce + dg, cf + dh]	
	Since A, B are non-singular, their determinent are non-zero. The determinent is given by of AB	
	[- 생생님 전 이 - 이 - 이 - 이 - 이 - 이 - 이 - 이 - 이 - 이	
	det (AB) = Lae + bg) (cf + dh) - laf + bh) (ce + dg)	
	show that det (AB) is non-zero and AB is	
	non-singular.	Drawn No.
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Meg		