

Subject Incharge :\_

PARSHVANATH CHARITABLE TRUST'S

## A.P. SHAH INSTITUTE OF TECHNOLOGY

Department of Computer Science and Engineering
Data Science

Semester:	Subject : DSGT	Academic Year: 2022-2023
* Cyclic Grou	<del>p</del> –	3/
A group (G if there exis every elemen power of a where by a Then G a generates	ts an element of car i.e. ak for i.e. ak f	I to be a cyclic group int a & G such that h be written as some or some integer k  * a a (k times).  be generated by a or  vays Abelian because ed.
where G	har (G, * = \$1, w, w	) is a cyclic group,
Composition	table -	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	0	
		in sentence and a series are



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Now we have a	- = \$1, w, w <sup>2</sup> 3
are have on	In a element
naus shock for	any apparator element?
11000 CHECK 100	any generator element?
sm to = 1 metting 3d	$\omega' = \omega$
12=1*1=1	$\omega^2 = \omega * \omega = \omega^2$
13=1*1*1=1	w3 = w * w * w = w2 * w = 1
14=1*1*1*1=1	search in table.
	$\omega^4 = \omega^3 + \omega = 1 + \omega = \omega$
element 1 generates	
lonly.	element w generating
J	all elements in a group
so 1 is not gen-	hence
erating all elements	w is a generator
hence 0	element.
1 is not generator	- Carlo di Status (David Conventino de la Conventino de l
element	THE COLUMN THE PROPERTY OF THE PARTY OF THE
$(\omega^2) = \omega^2$	STATE OF STA
$(\omega)^2)^2 = \omega^2 * \omega^2 =$	W'= W   see previous composit
$(\omega^2)^2 = \omega^2 * \omega^2 = (\omega^2)^3 = \omega^6 = \omega^3 *$	$\omega^3 = 1$ of $\omega$
(W2) = W0 = W0 *	w*w=
= 1.0	v <sup>2</sup>
$=\omega^2$	
	all elements in a group
& hence it is a	Jso a generater.  Y clic group.  Department of CSE-Data Science   APSIT
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