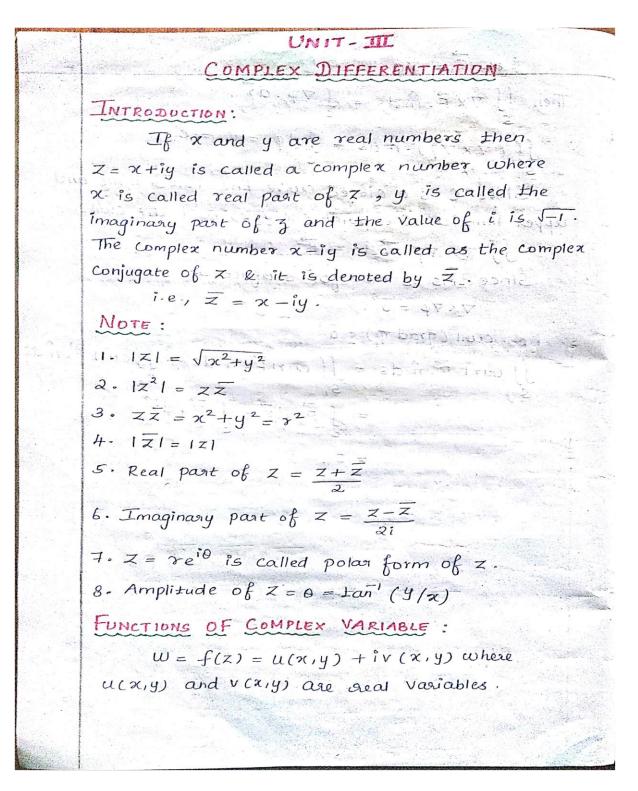


SNS COLLEGE OF TECHNOLOGY



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DEPARTMENT OF MATHEMATICS





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DEPATMENT OF MATHEMATICS

	Single Valued function:
	If for each value of z in R there will be
	only one value of w, then wis called a single
	valued function of Z?
Kin	$\underbrace{\mathcal{E}_{\mathcal{Z}}}^{\mathcal{Z}}: \omega = z^2, \omega = \frac{1}{z}, \omega = \frac{1}{z}, \omega = \frac{1}{z}, \omega = \frac{1}{z}$
	Z:1 2 -2 3 Z:1 2 -2 3
	$w: 1 + 4 - 9 + w: 1 - \frac{1}{2} - \frac{1}{2} \frac{1}{3}$
	Multiple - Valued function:
	If there is more than one value of w
	Corresponding to a given value of Z, then w is
naleu i	Called a multiple-valued function.
	$\mathcal{E}_{\mathcal{H}}: \ \ \mathcal{W} = \mathbf{z}^{1/2} \qquad \qquad$
	Z = 4, 9, 1
	$\omega : -2, 2, -3, 3, -1, -1$
	Analytic function:
	A function $f(z)$ is said to be analytic
in the second se	at a point Z = a in a Siegion R if
Contraction of the local distribution of the	(i) $f(z)$ is differentiable at $z = a$.
	(ii) f(z) is differentiable at all points for some
	neighbourhood of $z = a$.
	(or) A function is said to be analytic at a
afra f.	point if its derivative exists not only at that point
	But also in some neighbourhood of that point.