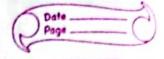
	Ex-28
٦	
	5(nx) ~
1	Given resies.
1	
1	5 (nx)
	The general term of the given series is,
	· · · · · · · · · · · · · · · · · · ·
4	$u_n = \left(\frac{n\alpha}{1+n}\right)^n$
4	(140)
4	By root test,
4	lim 1 = lim (un) 1/h
1	11→∞ A 1 1→∞
-	= lim nx beto mist broken state
1	n-200 1+n
1	Lim na n=> ~(1+1/n)
1	
1	= Jum 21
1	n→∞ (1+1/h)
1	= 2,
	By soot test, given series is convergent for x<1
	divergent for 2>1
	divergent for $x > 1$ when $x = 1$, the test fails,
	when $\alpha=4$,
	ense as how strate a day to
	(1+n)
	(Itn) Island I am and the side
	It's general term un= (1)
	It's general term $u_n = (1)^n$
1	2 1
╫	(1+n)n



	Thus the given series is convergent for x<1 divergent for x>1 test fail for x=1				
	divergent for x>1				
	test fail for 2=1				
	when $x=1$,				
	The series becomes,				
	THE SERVED PROPERTY AND ADDRESS OF THE PARTY A				
	21" = 51				
	$\frac{51^{\circ} = 51}{n(n+1)}$				
	The, general term in 1				
	N(n+1)				
	Let's suppose a series son = 51, [convergent by p test]				
	Let's suppose a series son = 51 , [convergent by p test]				
	NOW I AM TO A STAND BY A STAND BY				
	·				
	$\lim_{n\to\infty} u_n = \lim_{n\to\infty} \frac{1}{n + 2} \times n^2$				
	- 1i 1 4 4.0				
	= lim 1 xn2 n=0 n2(1+1/n)				
	= Lim 1				
	190 1+1/0				
	A Committee of the Comm				
	1 (11)				
	= 1 which is finite and non-zon				
	= 1 which is finite and non-zero,				
	The series is convergent for $x=1$.				
	The series is convergent for $n=1$.				
	So) The Onio				
	divergent for $x > 1$.				
	divergent for $\alpha > 1$.				
8)	$\frac{1+21+2^2+2^3+2\cdots}{2}, x>0$				
	Here, the series is, $1 + \frac{\pi}{2} + \frac{\pi^2}{3^2} + \frac{\pi^3}{4^3} + \cdots$				
	$1 + \frac{21}{3} + \frac{21}{23} + \frac{21}{23} + \cdots$				
	3- 43				

	Page				
	Now,				
	lim un: lim non (1+n)n				
	$\frac{1}{1+\frac{1}{n}}$				
	130 (1+1/1)				
	1-10 (1+1/n)n				
	- e 1				
	de anni di mane in i				
	lim un = 1 +0				
	So, the given Series is divergent for $x=1$ Thus, given series is convergent for $x<1$ divergent for $x>1$.				
	Thus, given sexies is convergent for a < 1				
	divergent for 2>1				
	avergent for				
(7)	$\frac{\chi}{2} + \chi^2 + \chi^{93} + \cdots$				
	1.2 2.3 3.4				
u^:	Given series is,				
	$\frac{\chi}{2}$ + $\frac{\chi^2}{2}$ + $\frac{\chi^3}{2}$ + $\frac{\chi^2}{2}$				
	$\frac{2}{1.2} + \frac{3^2}{2.3} + \frac{3^4}{3} + \cdots + \frac{3^n}{n(n+1)}$				
	The given general term is				
	$u_n = \frac{n^n}{n \cdot (n+1)}$				
	1.(11)				
	Now				
	Unti = 2nti				
	(n+1) (n+2)				
	New,				
	$\lim_{n\to\infty} \frac{u_{n+1}}{u_n} = \lim_{n\to\infty} \frac{x^{n+1}}{(n+1)(n+2)} \times \frac{x(n+1)}{2n}$				
	n-> ou no (n+1)(n+2) no				
	s Lim n n				
	$ \begin{array}{cccc} & = \lim_{\Lambda \to \infty} & \chi & & \\ & & & & \\ & & & & \\ & & & & \\ & & & &$				
7	n>0 1+2/n				

)	Page	
1		

The general term after first term is,
Un = 2c^
(n+1) ⁿ
N8ω,
Taking root tests
lim ~ un= 1 1/2 1/2 1/2 1/2 1/2 1/2 1/2 1/2 1/2 1
= Lim 1 m-> p 1+1
= 71
:0 <1
2 11 10/11 01 02 21 1
The series is convergent for all values of n,