ALTERNATING SERIES:

An alternating suites is a suiter when the sure

ALTERNATING SERIES TEST / LEIBNITZ' TEST:

To the atternating rules

in bn+1 < bn you all n

in the rules are consumpted in

Lest for the conungue of the ruis

(p)

PROBLEMS:

Soln: $\frac{Soln:}{\int_{-1}^{1}} \frac{Soln:}{\sum an} = \frac{Soln!}{\sum (-1)^{n-1}bn} = \frac{Soln!}{\sum (-1)^{n-1}}$

 \Rightarrow $bn = \frac{1}{n}$

Charly, n<n+1 AUFI

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	//	6
	$\frac{1}{n+1} < \frac{1}{n} , \forall n \geq 1$	(C
	=> " puti < pu' + u >1 " " " " " " " " " " " " " " " " " "	<u></u>
	mile to the court of general all the	
	Also, $\lim_{n\to\infty} b_n = \lim_{n\to\infty} \frac{1}{n} = 0$	6
	thou, by the allerating runs tat Libritz tet,	
	the guins rules $\sum_{n=1}^{\infty} \frac{(-1)^{n-1}}{n}$ is consumpted;	C
• • •	$\frac{\infty}{\sum_{n=1}^{\infty} (-1)^{n-1} e^{2/n}}$	(C
<u>(b)</u>	n=1	
	Soln: ∞ $1 + \sum_{n=1}^{\infty} a_n = \sum_{n=1}^{\infty} (-1)^n b_n = \sum_{n=1}^{\infty} (-1)^n e^{2/n}$	6
	$\int_{\Omega} \frac{1}{ x ^2} \sum_{n=1}^{\infty} \frac{1}{ x ^2} \int_{\Omega} \frac{1}{ x ^2} \int_{\Omega$	-6
	Charly, the given news as an attending sums.	6
	w.k.t n < n+1 , 4 n > 1 (393.907)	
	=> 1 < 1	(e
	$\Rightarrow 2 < 2 $	E
	n+1 n (1-) = 201	_e
	=> e < e [: exponential function is	E
	an invuaring function]	e e
	=> bn+1. < bn , \tau \text{ND}	
	$\lim_{n \to \infty} b_n = \lim_{n \to \infty} e^{/n} = e^0 = 1 \pm 0$	_
	$n + \infty$ $n + \infty$	1
	the state of the s	(0
	,	J.

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