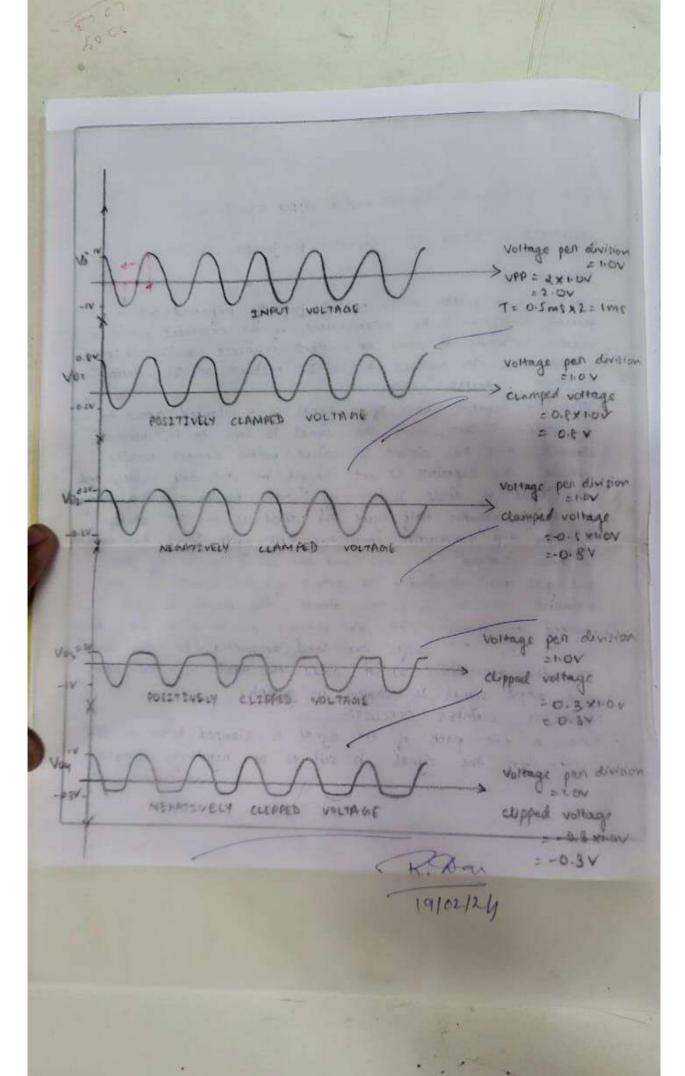


Date-Page No. _ 9 _____ Expt. No..... AIM: Designing a clamper and a dipper circuit. THE APPARATUS REQUIRED: Capaciton, pon junction, nesistan THEORY: Clamping is a function which must be frequently performed with a periodic wave form in the establishment of the necument positive on regative extremity at some ex constant reference level. Clamping cincuits are also referred to as DC restoners on DC insenter. POSITIVE CLAMPER CIRCUIT :-When a negative back of a signal is a clamped above to whom a negative it zero, then the signal is said to be positively damped and the circuit is ealled positive clamper circuit. Initially, the capaciton is not changed in the half eyele, and the eyele of diode is in aff state. As the capaciton change to on, in negative half cycle the diode is in 'ON' state. In the consecutive consecutive half eyele (tive), the consecution is now changed to the and the diode is in off state and gets open cincuited. The output of the cincuit at this moment will be vo = v; +vn. Hence, the signal is +ve clamped as shown. The vo changes according to the change in the vi, but shifts the level according I to the change on the capaciton, as it adds the input v;, the input and output signal 12 shown in graph. NEGATIVE CLAMPER CIRCUIT:when a tre pack of the signal is clamped below to the zero, then the signal is said to be negatively clamped Teacher's Signature:

19102124





Revense biased: If view, than the diade D is in revense state. The output voltage re-vi, the manifer curve has a view:—vi and has the following chanacteristics (assume and Rice). Imput (vi) Clippen cincuit with forward blas diade in series:— Vo-Vn Clippen cincuit with forward blas diade in series:— Clippen cincuit the amplitude (N) of the imput sine wave Select the amplitude (N) of the imput sine wave Select the pattery voltage (Vm): S. Sclect the battery voltage (Vm): C. Observe the imput signal and clipped output signal of Change the values of A f and Vn to observe the the output signal. E. Oven On the graph to observe the value of the V; instant of time T. 9. Save the graph if you are done with experiment. Clippen cincuit with revense bias diade in series:— Clippen cincuit with revense bias diade in series:— Clippen cincuit with revense bias diade in series:— Clippen cincuit with revense bias diade in series:—	ne breaks of ming va >> vy Diode state Diode : ON
stack. The output voltage novi, the manifer curve has a view of the pollowing characteristics (assure and Ricer). Things (vi) Vic Vn (=0) Clippen cincuit with poward blas diode in series: Select the cincuit diagnam of the clippen Clippen the select the frequency of the signal (f) from the couple. Select the battery voltage (Vm). Conserve the battery voltage (Vm). Change the values of A f and vn to observe the the autput signal. Change the values of A f and vn to observe the the autput signal. Change the values of A f and vn to observe the viral proper to on the graph to observe the value of the Viral power on the graph to observe the value of the Viral power of the viral power of the viral power of the clippen cincuit with peverse bias diode in series: Clippen cincuit with peverse bias diode in series: Clippen cincuit with peverse bias diode in series:	ne breaks of ming va >> vy Diode state Diode : ON
Supply (vi) Vi < Vn (=0) Vi < Vn (=0) Vi < Vn (=0) Vo = Vn Clippen cincuit with poward blas diode in series: I Observe the cincuit diagnam of the clippen Lick on the power do button Select the amplitude (h) of the input sine wave Select the frequency of the signal (f) fun the CV). S. Select the battery voltage (Vm). G. Deserve the input signal and clipped output signal (f) The autput signal. T. Change the values of A f and Vn to observe the the autput signal. T. Oven on the graph to observe the value of the V; instant of time T. 9. Save the graph if you are done with experiment. Clippen cincuit with revense bias diode in server: Clippen cincuit with revense bias diode in server:	Diode : ON
Vi Vn (=0) Vo = Vn Clippen cincuit with poward blas diode in series: 1. Observe the cincuit diagnam of the clipper 2. Click on the power do button S. Schect the amplitude (A) of the input sine wave L. Select the frequency of the signal (f) fun the CVf). S. Schect the battory voltage (Vm). G. Observe the imput signal and clipped output signal of T. Change the values of A f and Vn to observe the the autput signal. E. Oven on the graph to observe the value of the V: instant of time T. 9. Save the graph if you are done with experiment. Clippen cincuit with revense bias diode in series: Clippen cincuit with revense bias diode in series:	Diode : ON
Clippen cincuit with poward blas diode in series: i Observe the cincuit diagnam of the clipper 2 click on the power to button 3 select the amplitude (A) of the input sine wave 4 select the frequency of the signal (f) for the CV1). 5. select the battory voltage (Vm). 6. Observe the import signal and clipped output signal (r) 7. Change the values of A f and Vn to observe the the output signal. 6. Over on the graph to observe the value of the V; instant of time T. 9. Save the graph if you are done with experiment. Clippen cincuit with revense bias diode in series: 1. Observe the cincuit diagnam of the clippen.	
2. Click on the power to button 2. Click on the power to button 3. Select the amplitude (A) of the input sine wave 4. Select the frequency of the signal (f) for the CV(). 5. Select the battery voltage (Vm). 6. Observe the input signal and clipped output signal of 7. Change the values of A f and Vn to observe the the output signal. 7. Over on the graph to observe the value of the V; instant of time T. 9. Save the graph if you are done with experiment. Clippen cincult with revense bias diode in series:- 1. Observe the cincuit diagram of the clippen.	Diode: Off
2. Click on the power to button 2. Click on the power to button 3. Sclect the amplitude (A) of the input sine wave to select the frequency of the signal (f) for the CV(). 5. Sclect the battery voltage CVm). 6. Observe the imput signal and clipped output signal of the output signal and vn to observe the the autput signal. 7. Change the values of A f and Vn to observe the the output signal. 8. Oven on the graph to observe the value of the V; instant of time T. 9. Save the graph if you are done with experiment. Clippen cincult with revense bias diode in serves:— 1. Observe the cincuit diagram of the clippen.	
Societ the amplitude (A) of the input sine wave in select the frequency of the signal (f) for the CV1). So sclect the battery voltage (Vm). Go observe the imput signal and clipped output signal of the output signal and vn to observe the the output signal. The output signal. To over on the graph to observe the value of the Vinstant of time T. Sove the graph if you are done with experiment of sover the graph if you are done with experiment of the clipper circuit with reverse bias diode in series:	
Select the amplitude (A) of the input sine wave to select the frequency of the signal (f) for the CVf). S. Select the battery voltage CVm). G. Observe the import signal and clipped output signal of the cutput signal and volto observe the the autput signal. T. Change the values of A f and Vn to observe the the autput signal. T. Oven on the graph to observe the value of the V; instant of time T. 9. Save the graph if you are done with experiment. Clippen cincult with revenue bias diode in serves:- 1. Observe the cincuit diagram of the clippen.	
5. Select the battery voltage (Vm). 6. Observe the import signal and clipped output signal of the Change the values of the f and vn to observe the the output signal. 7. Over on the graph to observe the value of the Vinstant of time T. 9. Save the graph if you are done with experiment. Clippen cincult with neverse bias diode in series:- 1. Observe the cincuit diagram of the clippen.	
5. School the battery voltage (Vm). 6. Observe the import signal and clipped output signal of the Change the values of A, f and Vn to observe the the autput signal. 7. Over On the graph to observe the value of the V; instant of time T. 9. Save the graph if you are done with experiment. Clippen cincult with neverse bias diode in series:- 1. Observe the cincuit diagram of the clippen.	signal (VI).
5. Select the battery voltage (Vm). 6. Observe the import signal and clipped output signal of the Change the values of the f and vn to observe the the output signal. 7. Over on the graph to observe the value of the Vinstant of time T. 9. Save the graph if you are done with experiment. Clippen cincult with neverse bias diode in series:- 1. Observe the cincuit diagram of the clippen.	e input signa
over on the graph to observe the value of the Vinstant of time T. 9. Save the graph if you are done with experiment. Clippen cincult with neverse bias diode in series:- 1. Observe the cincuit diagram of the clippen.	10 10 10
over on the graph to observe the value of the Vinstant of time T. 9. Save the graph if you are done with experiment. Clippen cincult with neverse bias diode in series:- 1. Observe the cincuit diagram of the clippen.	
over on the graph to observe the value of the Vinstant of time T. 9. Save the graph if you are done with experiment. Clippen cincult with neverse bias diode in series:- 1. Observe the cincuit diagram of the clippen.	(Vo) in the gru
over on the graph to observe the value of the Vinstant of time T. 9. Save the graph if you are done with experiment. Clippen cincult with neverse bias diode in series:- 1. Observe the cincuit diagram of the clippen.	variation in
oven on the graph to observe the value of the Vinstant of time T. 9. Save the graph if you are done with experiment. Clippen cincult with neverse bias diode in series:- 1. Observe the cincuit diagram of the clippen.	
9. Some the graph if you are done with experiment. Clippen cincult with neverse bias diode in series:- 1. Observe the cincuit diagram of the clippen.	and a at II
9. Some the graph if you are done with experiment. Clippen cincult with neverse bias diode in series:- 1. Observe the cincuit diagram of the clippen.	and to as the
Clippen cincult with neverse bias diode in series:-	
1. Observe the cincuit diagram of the clippen.	
1. Observe the cincuit diagram of the clippen.	
e. Click on the power button.	
4. select the frequency (f) for the input signal.	
Teacher's Signature :	

ot. No	Page N	lo
and the circuit is calle	d negative clampen cincuit.	
CLAMPER CIRCUIT WITH	-: DIREMALL BY EFEZOR	
1. Observe the circuits	diagram of full wave rechi	tien.
o. Click on the power	buffon:	
3. Select the amplitude	CA) of the imput sine wave	signal (Vi)
4. Select the frequency	(f) of the signal for the	in put signo
(V3) ·	411	
5. Select the channel -1	to observe the input signa to observe the output signs	al on grap
G. Select the channel -	A, to observe the var	iation in the
input and output signal		
8. Hoven on the graph to	observe the value of the	vi and ve
at the instant of tin	ne '1.	
Maria de la compansión de		at
CLAMPER CIRCULT WITH	NEGATIVE CLAMPING:	1 09
proceed with same steps	a in positive clamping.	Land D
		forward bigs
CLIPPER CIRCUIT !-		7800
clippen cincuit with dia	te in serves:	LOR WARD HIGH
onward biased: If visva	then the diode D is in	en cunva la
mean 'ON' state. The ou		
ne bleak at vo = vi - who	and has the following ch	
Cossuming vassly) and Rice	Output (%) Diode	State
Input CVi)		de =ON
V1 >Vn (=0)	11 443	le = off
N < NU (=0)		
A STATE OF THE STA		
	Teacher's Signature :	



· XI	
t. No	Page No. 7
s. And proceed the same as in early	en experiment.
Conclusion:	
for from the above experiment, we a	me able to design clamps
and clippen circuit. We to dosenve the continuits.	graph and understand
Address of the Control of the Contro	
The second second second	
	Street Street Street
	The same of the sa
Teacha	r's Signature :
	01/07/14