Exp. No.: Date:

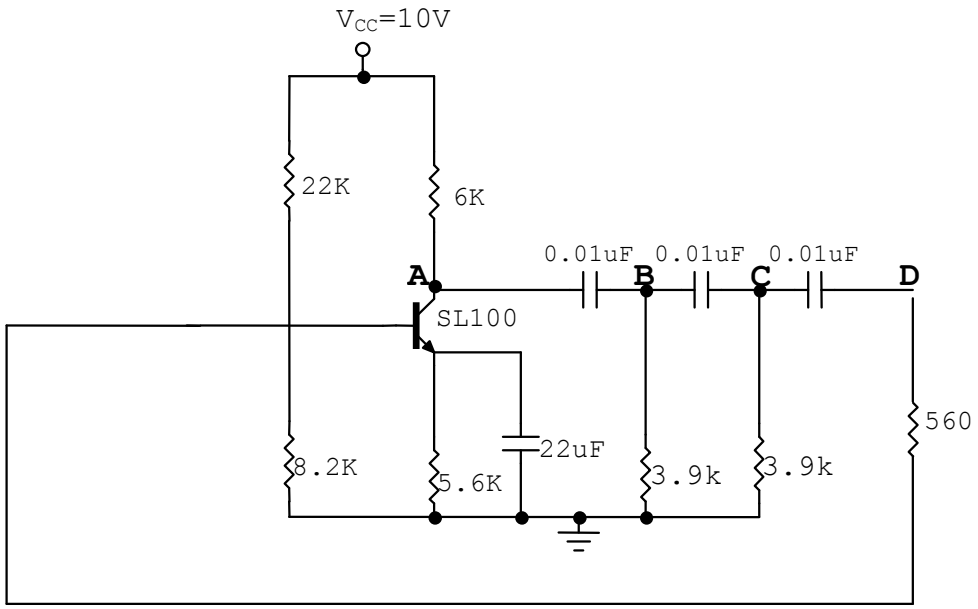
RC PHASE-SHIFT OSCILLATOR

AIM : To determine the frequency of the RC phase-shift oscillator and also determine the Phase difference at each RC Network.

APPARATUS :

S.No.	Name of the Apparatus	Range	Quantity
1.	SL100	-	1No.
2.	Power Supply	0-30V	1No.
3.	Resistors (Ω)	560K, 22K, 8.2K, 5.6K, 3.9K & 3.9K	Each 1No.
4.	Capacitor	22μF,	1No.
		0.01μF	3No.
5.	CRO	-	1No.

CIRCUIT DIAGRAM:



PROCEDURE:

1. Connect the circuit as shown in figure.
2. Set V_{CC} = 10V.
3. Observe the output waveform at Point **A** on CRO and measure the frequency.

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4. Calculate the phase difference between the points **A&B, A&C and A&D** using $\theta = \frac{d}{D} \times 360^0$

Where d is the distance between adjacent peaks.
D is the time period of the output waveform.

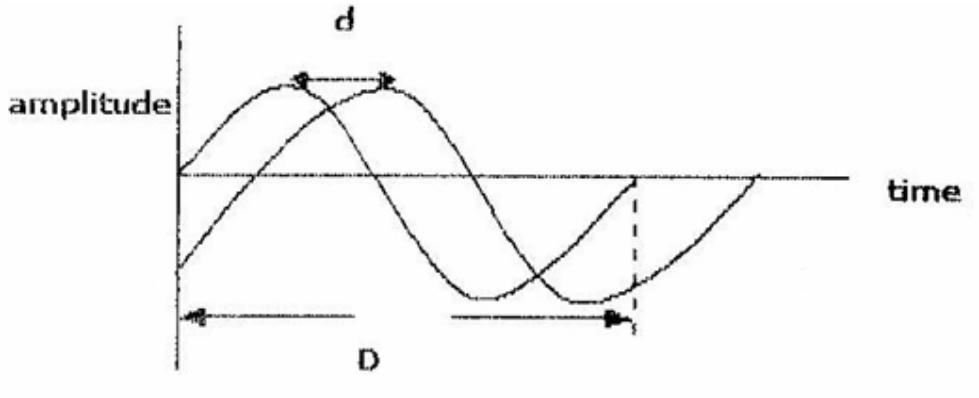
Theoretical frequency is calculated using

$$f = \frac{1}{2\Pi RC\sqrt{6+4K}} Hz$$ Where K= $\frac{Rc}{R}$ =

R = R_1= R_2= 3.9 K

=

MODEL WAVEFORM :



TABULATION:

Between	d	D	Phase Difference $\theta = \frac{d}{D} \times 360^0$
A&B			
A&C			
A&D			

RESULTS:

Practical frequency =

Theoretical frequency =