Experiment: 16

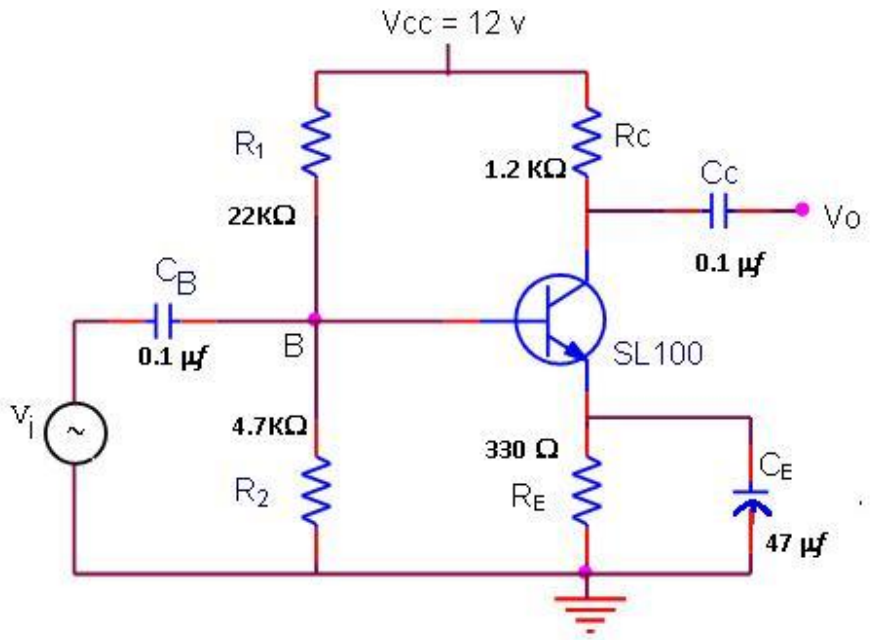
RC COUPLED TRANSISTOR AMPLIFIER

AIM: To show that a transistor works as an amplifier under suitable biasing conditions and hence to find the voltage gain.

APPARATUS AND COMPONENTS REQUIRED:

Transistor (SL100), Capacitors (0.1 μ*f*, 47μ*f*), Resistors (22KΩ, 4.7KΩ, 1.2KΩ, 330Ω), DC Supply, Signal Generator, CRO with probe

CIRCUIT DIAGRAM:



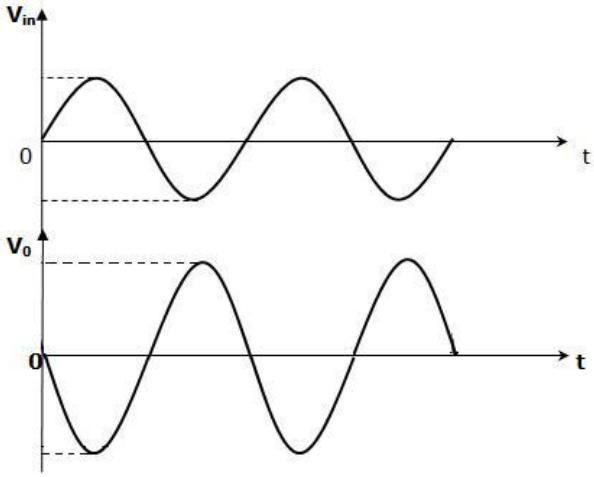
FORMULA USED:

Voltage gain of an amplifier is given by,

$$A_V = Vo(p\text{-}p) / Vin(p\text{-}p).$$

Where, Vo (p-p) is the output voltage (peak to peak) in V
Vin (p-p). is the input voltage (peak to peak) in V

WAVEFORM:



OBSERVATIONS:

Frequency f =_____ Hz

Input voltage, Vin(p-p) (V)	Output Voltage Vo(p-p) (V)	Voltage Gain A_V = Vo(p-p) / Vin(p-p)

RESULT: The voltage gain of the given transistor amplifier is ----------.