

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT
TEST-3 EXAMINATION DECEMBER 2018
5st Semester (ECE)

Pragya Gupta

COURSE CODE: 17B11EC511

COURSE NAME: Linear Integrated Circuits

COURSE CREDITS: 4

MAX. MARKS: 35

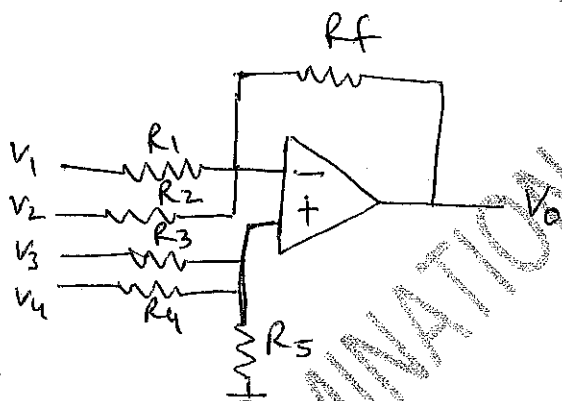
MAX. TIME: 2HR

Note: All questions are compulsory. Carrying mobile phone during examinations will be treated as a case of unfair means.

Q1(a). What are the two basic modes in which the 555 timer IC operates? Briefly explain the difference between the two operating modes of 555 timer IC. [1+2]

(b). Explain the working of 555 timer IC as an astable multivibrator with neat diagram. [4]

Q2(a). For the given circuit derive the expression of output voltage. [3]



(b). Design a 400Hz active notch filter. [2]

Q3(a) Explain the working of square wave generator by drawing the capacitor and output voltage wave form. [3]

(b). Design a square wave generator of frequency 2 KHz using IC741. [2]

Q4. Write a short note on the following:

(a) Modified Precision Rectifier. [2]

(b) Peak Detector [2]

Q5(a). Draw the circuit diagram of Wien Bridge oscillator and derive the expression of frequency of oscillation and gain. [1+2+1]

(b). Give the block diagram of IC566VCO and explain its operation. [3]

Q6. How can we generate triangular wave using Schmitt trigger? Explain it with neat diagram and derive the expression for frequency of oscillation and peak to peak amplitude of triangular wave. [2+3+2]