

**PUSAT PENGAJIAN DIPLOMA
UNIVERSITI MALAYSIA PERLIS**

Tutorial 5

DKT214 – Electronic Circuits; Semester 1 2017/2018

1. Define the oscillator.
2. With the aid of diagram, list the basic elements of an oscillator.
3. Describe the TWO (2) major types of oscillators.
4. Explain the principle of positive feedback.
5. List down three types of feedback oscillators that use RC circuits to produce sinusoidal outputs.
6. Describe the conditions for oscillation.
7. Determine the value of R_f necessary for the circuit in Figure 2 to operate as an oscillator. Then, determine the frequency of oscillation for that circuit.

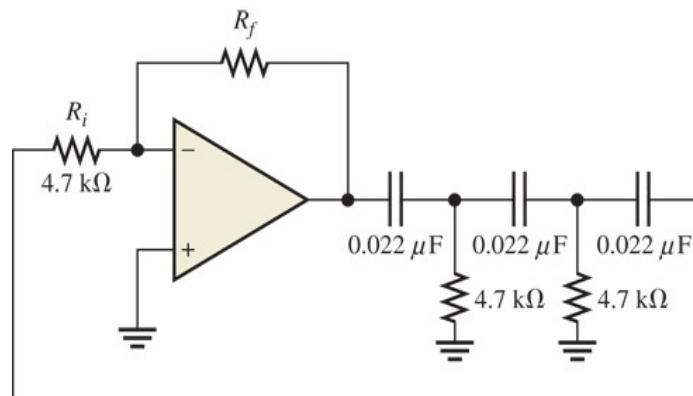


Figure 2

8. What type of signal does the circuit in Figure 3 produce? Determine the frequency of the output. Show how to change the frequency of oscillation in Figure 3 to 10 kHz.

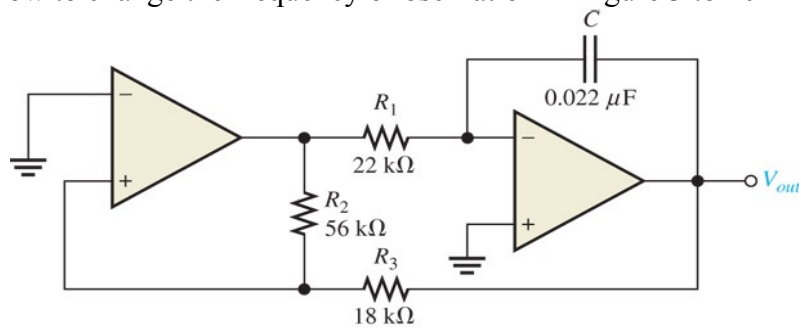


Figure 3

9. Figure 4 shows a comparator output in the form of square-wave and also the integrator output in the form of triangular-wave. Sketch an oscillator circuit that will produce the output in Figure 4.

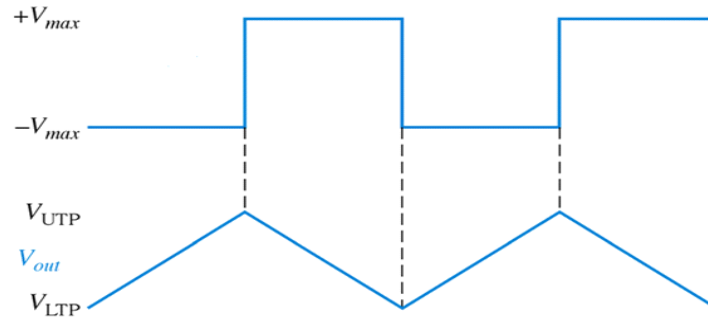


Figure 4