**205NET**

**2nd semester 1439 /1440**

**Assignment # 2**

Q1) What is the peak amplitude, frequency (angular and Hertz), and period of the following waves.

1. s(t) = 2 cos (80 πt + π)

b. s(t) = sin (14πt)

Q2) Write the mathematical representation of a sine wave that has a peak amplitude of 5 and a frequency of 500 Hz

Q3) Calculate the corresponding periods of the following frequencies:

Express the result in seconds, milliseconds, and microseconds

1. 18 Hz
2. 20 MHz
3. 4 KHz

Q4) Calculate the corresponding frequencies of the following periods.

Express the result in hertz, kilohertz, and megahertz

1. 20 μs
2. 9 s

c. 50 ns

Q5) What is the frequency of a periodic signal that completes one cycle in 0.01 s?

Q6) What is the bandwidth of a composed signal that has three sine waves with frequencies of 75, 30, and 100 Hz