

S16036

CPL106 Resubmission

03.)

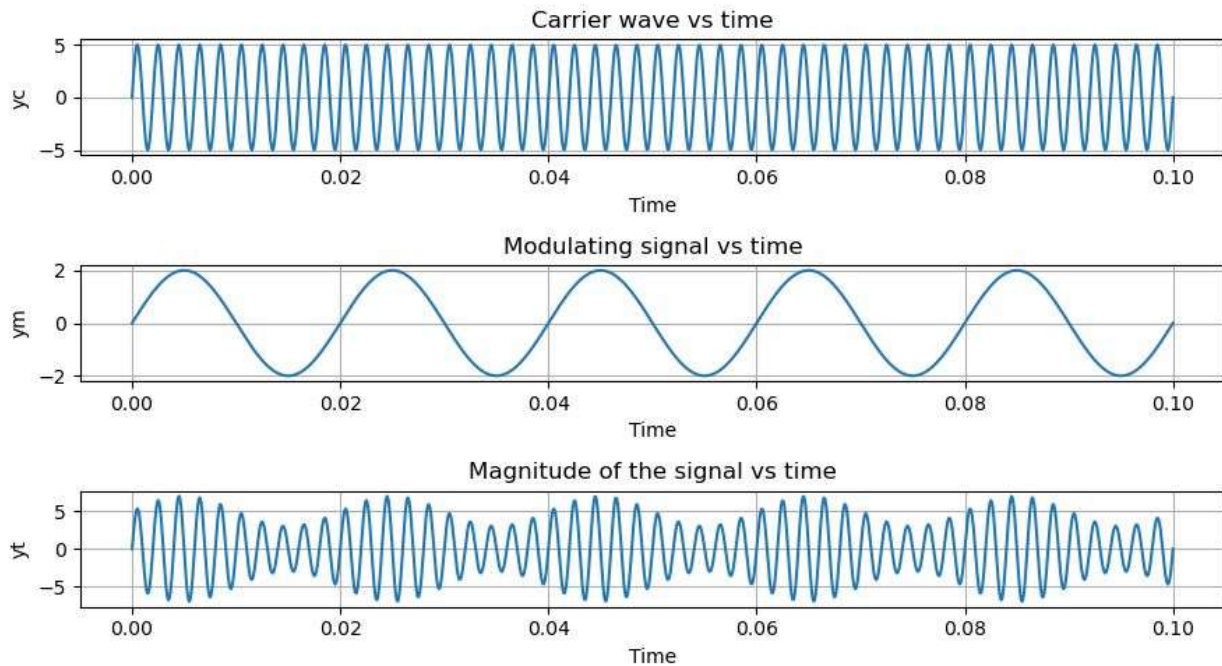
III.

a.)  $y_c(t) = 5 \sin(2\pi \times 500 \times t)$

b.)  $y_m(t) = 2 \sin(2\pi \times 50 \times t)$

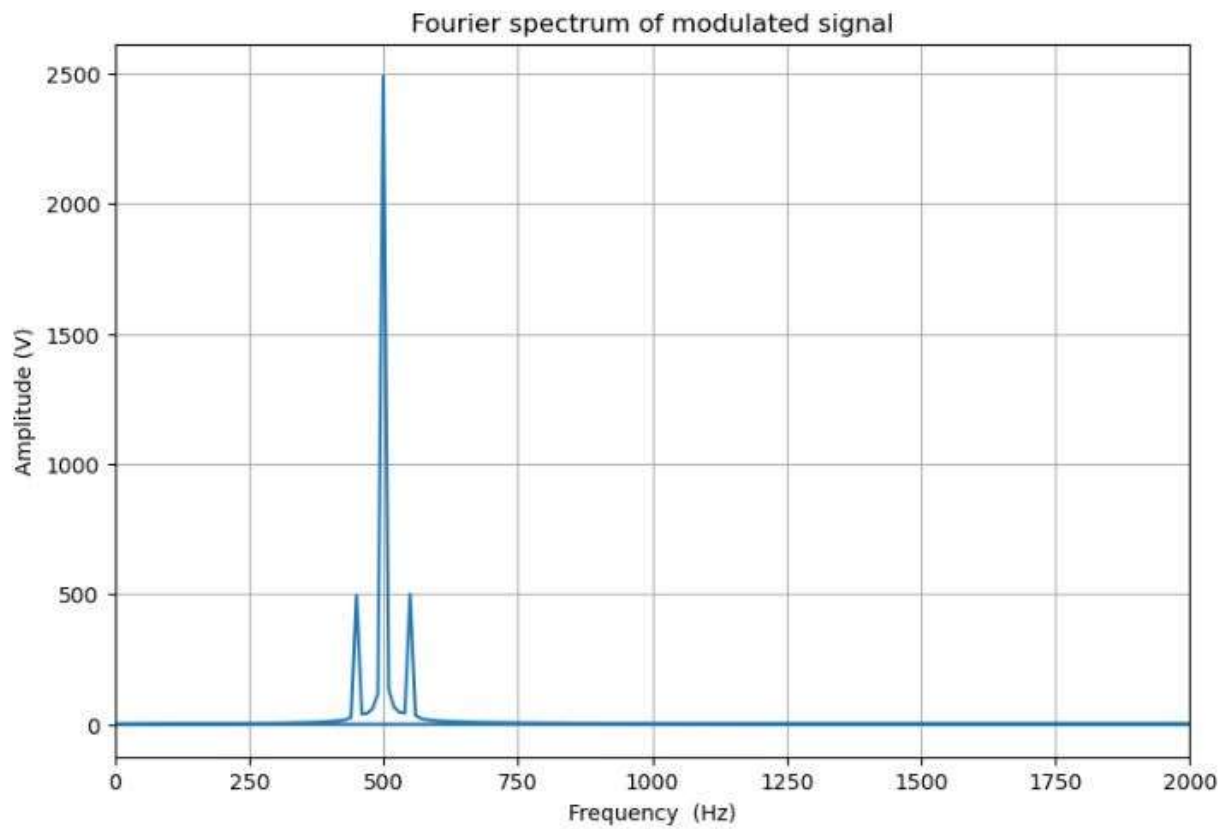
c.)  $y(t) = (5 + 2 \sin(2\pi \times 50 \times t)) \times \sin(2\pi \times 500 \times t)$

d.)



e.)

i.)



ii.

Lowest frequency = 0.0 Hz

iii.

Highest frequency = 499.5 Hz

iv.

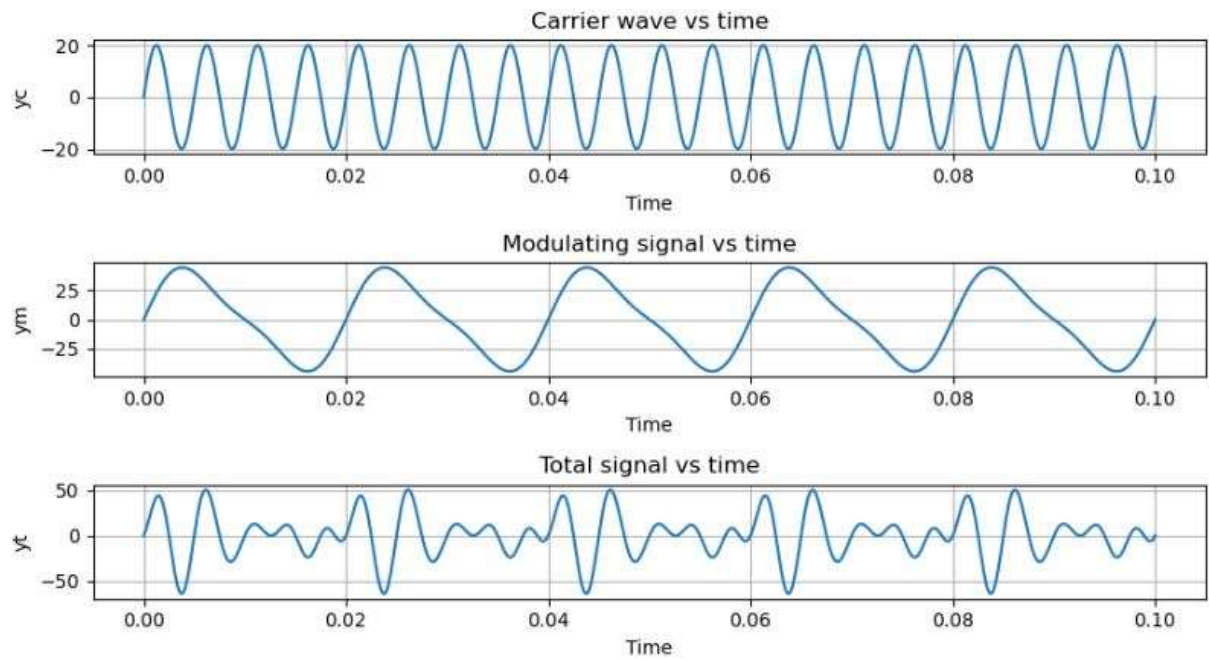
Bandwidth = 499.5 Hz

IV.)

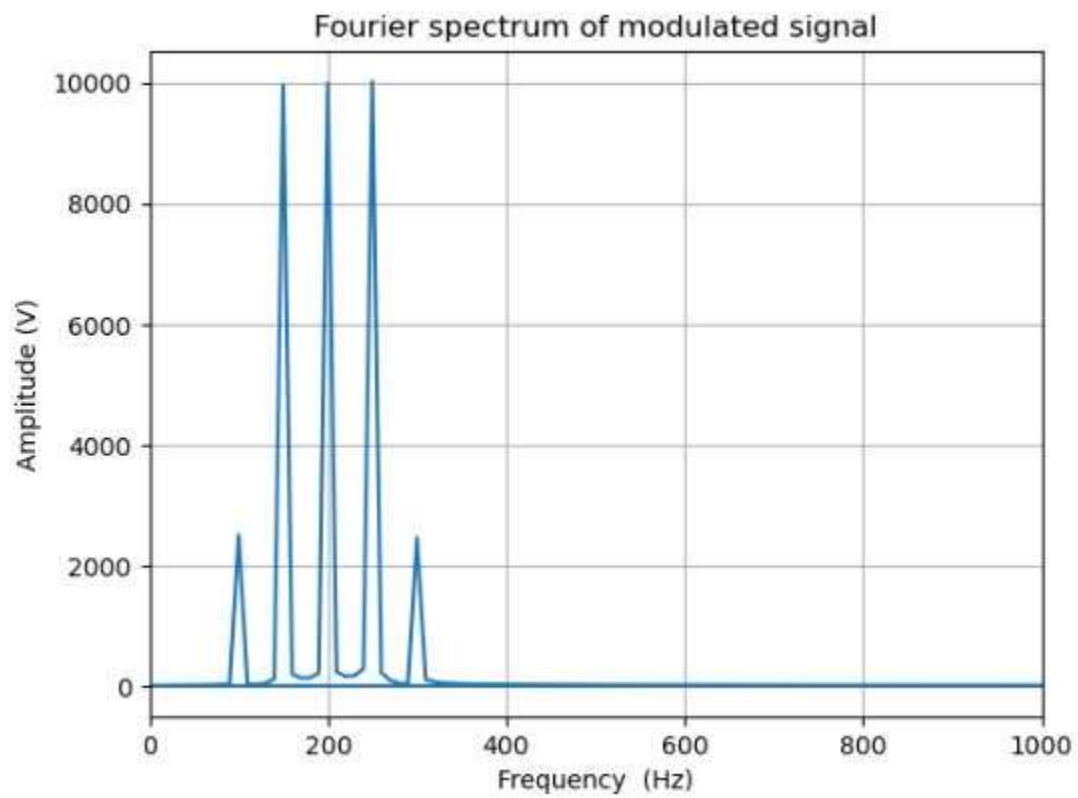
a.)

$$y(t) = \sin(400\pi t) \times ((10 \sin(200\pi t) + 40 \sin(100\pi t)) + 20)$$

b.)



c.)



ii.

Lowest frequency = 0.0 Hz

iii.

Highest frequency = 249.75 Hz

iv.

Bandwidth: 249.75 Hz