## Universiti Malaysia PAHANG
Engineering • Technology • Creativity

**Faculty of Electrical & Electronics Engineering**
**BEE 3413 Principles of Communication Systems**

Name: _____  ID: _____

Section: _____  Date: _____

**(Failed to complete all the particulars above will be penalized 2 marks)**

### QUIZ 1(individual)

| Mapping CO, PO, Domain, KI : CO1, PO1, C4 |
|---|
| CO2: Analyze and differentiate various types of modulation and demodulation techniques. |
| PO1: Ability to acquire and apply knowledge of sciences and electrical & electronics engineering fundamentals |
| C4:  Analysis |

For an AM modulator with a 75 MHz carrier having amplitude of 50 V is modulated by a 3 kHz audio signal having amplitude of 20 V.

(i)   Sketch the audio signal.

(ii)  Sketch the carrier.

(iii) Construct the modulated wave.

(iv)  Determine the modulation factor and percent modulation.

(v)   Identify the frequency content of AM signal and draw the frequency spectrum diagram.

(vi)  Find the trigonometric equations for the carrier and the modulating waves.

**[13 marks]**