ADC Quiz 1

Total points 5/10

The respondent's email (**aryan.langhanoja119561@marwadiuniversity.ac.in**) was recorded on submission of this form.

1 of 2 points

✗ A carrier is simultaneously modulated by two sine waves with modulation indices of 0.3 and 0.4;
the total modulation index 0/1

- ○ Cannot be calculated unless the phase relations are known
- ○ is 1
- ◉ 0.7 ✗
- ○ 0.5

Correct answer

- ◉ 0.5

✓ Amplitude modulation is the process of 1/1

- ◉ Superimposing a low frequency on a high frequency ✓
- ○ Superimposing a high frequency on a low frequency
- ○ Carrier interruption
- ○ Multiplying two signals

Untitled Section

0 of 2 points

✗ Indicate the false statement. Modulation is used to 0/1

- ◉ Separate differing transmissions ✗
- ○ reduce the bandwidth used
- ○ ensure that intelligence may be transmitted over long distances
- ○ allow the use of practicable antennas

Correct answer

- ◉ reduce the bandwidth used

✗ A 100MHz carrier is frequency modulated by 10 KHz wave. For a frequency deviation of 50 KHz, calculate the modulation index of the FM signal. *0/1

- ◉ 100 ✗
- ○ 50
- ○ 90
- ○ 70

Correct answer

- ◉ 50

Untitled Section — 0 of 1 points

✗ For a FM signal v(t) = 10 cos (15 * 10^8t + 10 sin 1550t), calculate Modulation index and Maximum frequency deviation. ···/1

2468.152 ✗

Correct answer

index=10, deviation=2466Hz

Untitled Section — 0 of 1 points

✗ Determine the Bandwidth of a FM wave when the maximum deviation allowed is 75KHz and the modulating signal has a frequency of 10KHz. ···/1

170 ✗

Correct answer

170kHz

Untitled Section — 1 of 1 points

✓ The amount of frequency deviation from the carrier center frequency in an FM transmitter is proportional to what characteristic of the modulating signal? *1/1

- ○ Shape
- ◉ Amplitude ✓
- ○ Phase
- ○ Frequency

Untitled Section — 1 of 1 points

✓ If the carrier of a 100-percentage modulated AM wave is suppressed, the percentage of power-saving will be 1/1

- ◉ 66.66 ✓
- ○ 50
- ○ 100
- ○ 150

Untitled Section — 1 of 1 points

✓ According to Carson's rule, Bandwidth B and modulating frequency fm are related as *1/1

- ○ BW > 2fm Hz
- ○ BW = fm Hz
- ◉ BW = 2(Δf + fm) Hz ✓

BW < 2fm Hz

Untitled Section

1 of 1 points

✓ What is the maximum frequency deviation allowed in commercial FM broadcasting? *1/1

- 120 KHz
- 100 KHz
- 75 KHz ✓
- 15 KHz