

Started on Wednesday, 8 May 2019, 11:55 AM

State Finished

Completed on Wednesday, 8 May 2019, 11:57 AM

Time taken 2 mins 11 secs

Grade 100.00 out of 100.00

Question 1

Correct

Mark 100.00 out of 100.00

Quiz 12d

Given the compact trigonometric form is

$$f(t) = a_v + \sum_{n=1}^{\infty} A_n \cos(n\omega_0 t - \theta_n)$$

The Fourier coefficients for a function $f(t)$ were found to be:

$$a_v = \frac{2V_m}{\pi} \quad a_n = \frac{4V_m}{\pi(1-4n^2)} \quad b_n = 0 \quad V_m = 10 \text{ Volts}$$

Find the following coefficients in the compact trigonometric form for this function.

$$a_v = \boxed{6.366} \checkmark \text{ Volts}$$

$$A_1 = \boxed{-4.244} \checkmark \text{ at angle } \theta_1 = \boxed{0} \checkmark ^\circ \text{ (Degrees) Volts}$$

$$A_2 = \boxed{-0.8488} \checkmark \text{ at angle } \theta_2 = \boxed{0} \checkmark ^\circ \text{ (Degrees) Volts}$$

$$A_3 = \boxed{-0.3637} \checkmark \text{ at angle } \theta_3 = \boxed{0} \checkmark ^\circ \text{ (Degrees) Volts}$$

Correct

Marks for this submission: 100.00/100.00.

◀ Quiz 11 - Chapter 16

Jump to... ▼

Exam 3 (Final) - Bode Diagram, Chapters 14, 15, 16, and Bode Diagrams ►